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ABSTRACT

This resource book provides methods and resources for teachers to integrate global issues and sustainable development concepts into a high school curriculum focusing on world history, world cultures, world geography, or global studies. The resource book contains 12 chapters. Chapter 1 is "Sustainable Development and World History and Cultures." Chapter 2 is "Student Objectives." Chapter 3 is "Methods for Infusing Sustainable Development in World History and Cultures Courses." Chapter 4, "Sample Lessons," contains: (1) "Introduction"; (2) "What's in a Name?"; (3) "Values and Sustainable Development"; (4) "Introduction to Sustainable Development"; (5) "Cultural Assumptions and Sustainable Development"; (6) "Africa and the Industrial Revolution"; (7) "Worldviews of Development"; (8) "The Quality of Life and Sustainable Development"; and (9) "Decisions for a 'Developing' Nation." Chapter 5, "An Analytical Framework for Sustainable Development," includes: (1) "Introduction"; (2) "Sample Questions"; (3) "Definitions and Examples"; and (4) "Sources." Chapter 6, "Annotated List of Lessons for Teaching Sustainable Development," contains: (1) "Introduction"; (2) "Sample Placement of Lessons"; (3) "Annotated List of Lessons"; (4) "Sources"; and (5) "Index to the Annotated List of Lessons." Chapter 7 identifies courses for the inclusion of teaching sustainable development. Chapter 8, focusing on resources, is divided into three sections. The first section is a core selection of videos; the second section lists videos organized topically; the third secton focuses on Africa. Also listed in this chapter are: sources of audiovisuals; bibliography; free publications; and resource organizations. Chapter 9 provides "A Guide to Action for Sustainable Development." Chapter 10 suggests "Test Questions." Chapter 11 provides further readings on sustainable development. Chapter 12 provides a glossary for the concepts presented. (EH)

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A Sustainable Development Curriculum Framework for World History & Cultures

Global Learning, Inc.

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Global Learning, Inc. is a non-profit educational organization that translates the world's growing interdependence into educational activities for teachers, students and educational systems from elementary school through college.

Global Learning's action program is threefold:

The Sustainable Development and World History/Cultures Program has developed this book and conducts teacher education programs to assist with its implementation and dissemination.

The Conflict Mediators Program trains teachers and students in mediation skills and establishes Conflict Mediators Programs in elementary and secondary schools.

New Jersey and the World is a collaboration with ten colleges and universities. It created and is disseminating college level educational materials on New Jersey's international linkages, including learning modules across the disciplines and a computerized data base. These resources can be used at the secondary level with minor adaptations.

Global Learning provides:

Program presentations, in-service and curriculum development workshops, courses, conferences and consultations for interested educators, schools, colleges and professional associations; and

Affirmative action workshops on cross-cultural awareness and conflict resolution for corporations.

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A Sustainable Development Curriculum Framework for World History and Cultures

Jeffrey L. Brown, Paula Gotsch, Fred Cotterell, Thomas Crop,
Linda W. Murchio, Sara Talis and Marie Varley

Sustainable Development
meets the needs of the present
without compromising the ability of
future generations to meet their own needs.

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"Levels of Integration of Ethnic Content"—James A. Banks and Cherry A. McGee Banks, MULTICULTURAL EDUCATION: ISSUES AND PERSPECTIVES, Boston: Allyn and Bacon, 1989.

Handouts 5 and 6 and a majority of the glossary—The Common Heritage Programme, 200 Isabella Street, Suite 300, Ottawa, Ontario, Canada K1S 1V7

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Foreword

The conceptualization, development, field testing and publication of this *Sustainable Development Curriculum Framework for World History and Cultures* was a collaborative process involving many, many people. Paula Gotsch, Global Learning's Associate Director, and I recruited five people for their experience in teaching, supervising other teachers, developing curricula, and for their expertise in development issues. The seven of us spent months discussing and arguing about the basic definitions and concepts of development, as well as their application to high school social studies. Slowly a common vision emerged and the working relationships meshed. We brainstormed, we read, we drafted, we gave feedback, we redrafted, and we redrafted. Some of the work is attributed to us as individuals, some of it was redone so many times it would be impossible to give attribution.

We were greatly assisted in coming to common ground around the concept of sustainable development by a full day briefing at the United Nations, organized by Michael McCoy, then Senior Programme Officer at the Non-governmental Liaison Service.

Eight scholars who were born in "Third World"* countries and who teach at colleges in New Jersey, read the draft materials and critiqued them for bias and accuracy. The feedback from these scholars was gratefully incorporated in the next revision.

The resources developed or identified were then officially piloted by 14 teachers in seven schools. Each school received a three inch notebook of reprints of classroom activities annotated in Chapter 6. The depth of the treatment during the piloting phase varied widely, from teachers' using only a few activities, to teachers' developing or revising entire courses. These teachers made numerous suggestions to improve and expand the original materials and contributed to the fact that our final product is more than two-and-a-half times longer that we had originally planned!

We have demonstrated the approaches and materials we were developing at teacher education workshops throughout the course of this three year project. Workshop participants gave us much constructive feedback, which was then

---

* Based on the discussion in Chapter 1 of the problems with development language, we have intentionally put the terms *Third World*, *developed* and *developing* in quotation marks throughout this book as a reminder of these difficulties of connotation.

incorporated into our revisions. Participants also began to incorporate our resources and the concept of sustainable development into their own teaching and curriculum development before our work was completed, with the world cultures course outline in Chapter 7 being a case in point.

Global Learning now looks forward to disseminating this teacher resource book nationally and is prepared to conduct teacher education programs to help implement the approaches and learning strategies assembled between these covers.

ACKNOWLEDGEMENTS

We are grateful to the teachers who piloted these materials and to their supervisors who gave both permission and encouragement. The piloting teachers and their schools included:

Bridgewater-Raritan High School East—Robert Mack

Bridgewater-Raritan High School West—Thomas Crop, Social Studies Supervisor, Robert Fischer, Alan Rossi

Madison Central High School, Old Bridge—Linda Whalen Murchio

Morristown High School—Anton Schulzki, Social Studies Department Chairperson, Mary Ann Kaub, Kathleen Kelly

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Paramus High School—Fred Cotterell

Teaneck High School—Edwin Reynolds, District Social Studies Supervisor, Margaret Aymeyer, Marc Gruber, Sandra Verley.

We appreciate the time and thoughtful comments given by the "Third World" scholars who reviewed our original draft.*

Osmen Ahmed, Raritan Valley Community College, Engineering & Islamic Service—Egypt, 1961

Patrick Caulker, Seton Hall University, History—Sierra Leone, 1966

Bonghee Choi, County College of Morris, English as a Second Language—Korea, 1979

Nadir Kaddour, County College of Morris, English as a Second Language—Algeria, 1977

---

* Year noted is the year they came to the US.

Tulsi Maharjan, Raritan Valley Community College, International Education—Nepal, 1972

Annita Scotland, County College of Morris, Education—Guyana, 1979

Manju Sheth, Glassboro State College, Sociology, International Studies—India, 1959

Dympna Ugwu-Oju, Middlesex County College, English & Journalism—Nigeria, 1974

In December 1989 and January 1990, we received excellent volunteer research assistance from Aileen Huang, a senior at Bucknell University who is currently serving in Nicaragua for Habitat for Humanity International. Aileen did the initial research on audiovisuals and action suggestions for students.

In the fall of 1990, we learned of an international children's art exhibit being prepared by the Children's Museum of the Arts in New York City. Kathleen Schneider, Executive Director, and Rita London, Exhibition Developer, were most cooperative and generous in arranging for us to include a dozen original pieces from "A Child's World." Readers who may want to arrange for a showing of this exhibit in their communities should contact the Museum directly.*

Special thanks go to Joy Williams, Global Learning's secretary and office manager for many years. Joy patiently typed and retyped everything from bits and pieces to chapters. She also located resource materials and background information on potential funding sources and kept us relatively organized throughout the duration.

Bucky Schnarr has contributed hundreds of volunteer hours in desktop publishing this entire book, using Ventura Publisher. He deserves credit for layout and design, from a to z—and for patience to match. Our gratitude will last longer than the shelf life of this book.

Peter Maulbeck, Global Learning's treasurer, arranged for the donated proofreading services of his firm, KPMG Peat Marwick. The fine points of grammar and punctuation are much finer as a result.

Joseph T. Moore of Montclair State College serves as the project's evaluation consultant. In this capacity, he has developed the bank of test questions in Chapter 10 and is in the process of evaluating the impact of this project in our piloting schools.

The staff of the Development Education Program at the United States Agency for International Development have been most supportive and encouraging, in particular Tracy Doherty, Coordinator, and Beth Hogan, former Coordinator of

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* "A Child's World," Collection of the Children's Museum of the Arts, 95 Greene Street, New York, NY 10012.

the Program. A special word of appreciation to David Watson, our Project Officer for all three years of this grant. David has helped us through the red tape time and again, provided insightful suggestions and massive doses of encouragement throughout the entire process, and we are grateful for the help.

The Project Team members' affiliations are noted below. It has been a pleasure to work with each and every person. I have especially appreciated the unique perspectives and talents each one so generously contributed throughout this project, as well as the willingness to go the extra mile, read the extra memo, write the extra line.

Of extra special note is my appreciation to Paula Gotsch, Project Associate Director, who has been involved from the very beginning of seeking funds for this project to the final editing of every chapter and section of this book. Her constructive feedback on matters of both minor and major import has been invaluable, as has her initiative in identifying significant resources and creative opportunities for networking and outreach. THANK YOU ONE AND ALL!

Jeffrey L. Brown
Project Director
December 1990

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Jeffrey L. Brown, Executive Director, Global Learning, Inc.; Project Director and Editor

Paula Gotsch, Associate Director, Global Learning, Inc.; Project Associate Director and Co-editor

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Thomas Crop, Social Studies Supervisor, Bridgewater/Raritan School District; former teacher of a senior honors global studies course; adjunct instructor at Raritan Valley Community College

Linda Whalen Murchio, Social Studies Teacher, Madison Central High School, Old Bridge; Educational Consultant to *Earthpost*

Sara Talis, Director of Missions Education, SMA Fathers: Society of African Missions; adjunct faculty at Caldwell College and Drew University

Marie Varley, New Jersey Regional Director of Church World Service/CROP; former social studies teacher, principal and college instructor at Caldwell College

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All life is centered around the canal in our village. Women and young girls come from far and near to fetch water for their daily needs. Washing is also done here. The cows are also given a bath. Young girls dress in beautiful embroidered clothes and wear a lot of heavy jewelry. They usually meet here and gossip.

Coming for Water

Fatimar Bashir
Age 12
Pakistan

Chapter 1

Sustainable Development and World History & Cultures

Breakthroughs in thinking are rare, but they do occur. After almost three decades of watching the gap between the world's rich and poor countries yawn ever wider and seemingly isolated environmental problems emerge as an ecological crisis on a global scale, world leaders have put some pieces together in a new and promising fashion.

Instead of the environment's being treated as an afterthought in the development process—something either expendable or requiring ex post facto clean-up, the environment has been recognized as the foundation from which development grows and upon which development always depends. At the same time, the eradication of poverty in the world was reaffirmed as the primary goal of economic development.

These changes in thinking are summarized in the concept of "sustainable development," which is defined most concisely as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (OCF, p.43) This breakthrough in thinking has emerged in published form as *Our Common Future,* the 1987 report of the World Commission on the Environment and Development (WCED) to the General Assembly of the United Nations.

This breakthrough in thinking, literally on the global level, helped clear some initial obstacles to conceptualizing this project. Our original goal was to create a framework in which high school teachers could teach about "Third World

development" as an integral part of their world history or world cultures course. A review of the latest development educational materials, however, revealed a serious pitfall embedded in one's choice of language with which to begin the task. In a word, ethnocentrism. Ethnocentrism can be defined as judging others by one's own values and standards without regard for the others' values and standards.*

As soon as we begin to use the traditional language of development, we begin to reinforce views of the world based on "us versus them." For example, if the United States is "developed," and Nigeria is "developing," it appears logical that the Nigerians are trying to become like us. Worse yet, if Bangladesh can be said to be "under-developed," they are less than we. They stand "under" us, and it is highly unlikely that we will ever be able to understand them from a perspective other than that of an implied superior.

Avoiding Stereotypes

One of the reasons states such as New Jersey have begun to require courses in world history and world cultures involves not only students' lack of factual knowledge about the rest of the world, but also their judgmental attitudes that reinforce past stereotypes and outright bias. Thus, we did not want to fall into the trap of reinforcing stereotypic ideas of students—and teachers—by the very language we used to discuss this global issue.

---

* Seeking a cure for ethnocentrism need not lead to cultural relativism, in which one tries not to make any value judgments at all vis a vis another culture. Teachers have been increasingly criticized for winding up in this position when faced with fundamental justice issues like apartheid or infanticide.

One solution to the problem of cultural relativism is a process of both analytical and reflective thinking. One must be able to suspend judgment for a period of time in order to feel and understand the other's position. This suspension of judgment does not mean one has to agree with the position, just seek to view it from the other's perspective. Having done so, one then makes a reflective judgment and may decide to act against the other's position and values. However, one has given the other person or group the respect of being taken seriously.

One assumption operating in this approach is that no one person or group has a corner on the "Truth," and thus, as Gandhi taught, we must remain open to the truth even in our opponent's stance. In such reflective action, one proceeds humbly, remaining open to further dialogue on the underlying values from which conflicts may emerge.

Development More Than Economics

Traditional development language is also guilty of oversimplifying the very complex, holistic process of development by implying that it refers primarily, if not exclusively, to economic activities. Again, such an assumption negates the achievements of centuries of cultural, social and political developments by peoples the world over and can reinforce the American student's unintended bias.

A Solution

The language of "sustainable development" helps us escape from these traps. First of all, it recognizes the fact that the development process involves all institutions of a society, not just the economy. Secondly, this language redefines the totally dependent relationship of such multifaceted development on its ecological base. Thirdly, sustainable development reaffirms equity—especially overcoming the widening rich-poor gap in the world—as the primary goal of development. Thus, this new language gives all societies a new norm by which to evaluate their means of providing for both present and future needs—the norm of sustainability rather than the norm of one country's or another's economic system. All nations in the world are in the process of "developing."

It is for these reasons that this Curriculum Framework focuses, not just on "Third World development," but rather on the more inclusive concept of "sustainable development."

THE ENVIRONMENT—DEVELOPMENT—EQUITY CONNECTIONS

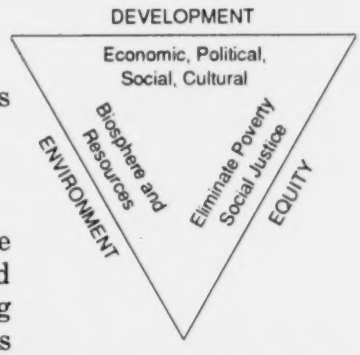
Sustainable development contains within it three major elements—the environment, development and equity. What may enable the world's people to meet their broad-based needs in a sustainable way over the coming generations is increased understanding of how these elements are not isolated from one another, but are interconnected. As the World Commission on Environment and Development has noted:

> Through our deliberations and the testimony of people at the public hearings we held on five continents, all the commissioners came to focus on one central theme: many present development trends leave increasing numbers of people poor and vulnerable, while at the same time degrading the environment. How can such development serve next century's world of twice as many people relying on the same environment? This realization broadened our view of development. We came to see it not in its restricted context of economic growth in developing countries. **We came to see that a new development path was required, one that sustained human progress not just in a few places for a few years, but for the entire planet into**

> **the distant future. Thus "sustainable development" becomes a goal not just for the "developing" nations, but for industrial ones as well.**
> (OCF, p.4—emphasis added)

Thus, we human beings are beginning to recognize the connections among what used to be thought of as separate crises. "These are not separate crises: an environmental crisis, a development crisis, an energy crisis. They are all one." (OCF, p.4) Through the vehicle of the United Nations system, and particularly through the work of the World Commission on Environment and Development, the world community has recently set a new goal toward which to work and by which to judge human practices and policies.

THE RELATIONSHIP



Three lessons emerge from the interrelationships of the environment, development and equity.

Environment First

First, the traditional relationship between the **environment** and the economy in industrialized societies is being transposed. Instead of pursuing economic activities of production and distribution as primary and looking at the consumption of natural resources and the impacts on the environment as incidental, we humans are beginning to realize we must put the environment first. This means committing ourselves to conserving resources even as we use them. It also means including the environmental "costs" of an economic activity as integral to the overall costs of that activity, not treating them as a "by-product" or an afterthought to be cleaned up. "Thus economics and ecology must be completely integrated in decision-making and lawmaking processes not just to protect the environment, but also to protect and promote development." (OCF, p.37) If we do not do these things, we will deplete nonrenewable resources like petroleum or the biological diversity of the rainforests so that future generations will be deprived of their benefits. We could also alter the biosphere so as to threaten the continuation of human—and other—life itself.

Holistic Development

A second lesson has emerged as well. The processes by which people meet their needs can be called **development.** Thus examination of a country's "development" includes not just economic processes and institutions, but also cultural, social and political processes. These processes and their institutions are all interrelated and are all nested in global systems.

Overcoming Poverty

Third, the concept of **equity** refers in general to achieving social justice. Within the context of sustainable development, equity refers to the goal of eliminating poverty in the world, and, particularly, eliminating the gap between rich and poor countries that has been growing wider for decades, if not for centuries. "A world in which poverty and inequity are endemic will always be prone to ecological and other crises." (OCF, p.44) Thus sustainable development affirms that the primary goal of the broad processes of development should be the elimination of poverty.

There are at least three reasons why the rich should not be getting richer while the poor get poorer. First, reducing the amount of human suffering in the world requires the end of abject poverty. Second, poverty creates conflict and instability, which can lead to social unrest, repression and violence. Social and political systems cannot be sustained in the long run if they rest on such unstable foundations. "...relationships that are unequal and based on dominance of one kind or another are not a sound and durable basis for interdependence." (OCF, p.67) Third, poverty also adds tremendous stress to the already beleaguered environment as poor people use resources and pollute their surroundings despite the long term consequences because their immediate needs are so severe.

There is no consensus in the world community on how to achieve this goal of eliminating poverty in the world. However, within the framework of sustainable development, present and proposed actions should be evaluated, in part, on how they will contribute to, or detract from, this goal of equity, as well as for their total impact on the environment.

CHANGES ENVISIONED

The concluding section of the second chapter of *Our Common Future* contains a summary of the global changes perceived as necessary if we are to move toward sustainability. Teachers can use this statement as a guidepost by which students can investigate current issues and their historical antecedents, as well as evaluate proposed solutions to global problems.

> In its broadest sense, the strategy for sustainable development aims to promote harmony among human beings and between humanity and nature. In the specific context of the development and environment crises of the 1980s, which current national and international political and economic institutions have not and perhaps cannot overcome, the pursuit of sustainable development requires:
>
> - a **political system** that secures effective citizen participation in decision making,
> - an **economic system** that is able to generate surpluses and technical knowledge on a self-reliant and sustained basis,

- a **social system** that provides for solutions for the tensions arising from disharmonious development,
- a **production system** that respects the obligation to preserve the ecological base for development,
- a **technological system** that can search continuously for new solutions,
- an **international system** that fosters sustainable patterns of trade and finance, and
- an **administrative system** that is flexible and has the capacity for self-correction.

These requirements are more in the nature of goals that should underlie national and international action on development. What matters is the sincerity with which these goals are pursued and the effectiveness with which departures from them are corrected.
(OCF, p. 65)

This resource book provides methods and resources for teachers to take these global issues and sustainable development concepts and integrate them into a high school curriculum focusing on world history, world cultures, world geography or global studies. We end this chapter with Robert Woyach's excellent summary of the state of world history in the curriculum of high schools in the United States. Woyach concisely describes the context within which we are all undertaking this critical and stimulating task of infusion.

WORLD HISTORY IN THE SECONDARY SCHOOL CURRICULUM

by Robert B. Woyach*

Since 1980, an increasing number of state and local education agencies have reintroduced a world history requirement into their secondary curricula. These mandates have raised important questions about the nature of such a course and its role in the curriculum. This ERIC Digest looks at some of the key questions in the debate over world history. It examines (1) the background for issues of curriculum reform in world history, (2) the choice between Western and "world" history, (3) the trend toward social history, (4) the viability of the traditional historical survey, and (5) the issue of whether world history should be taught over more than one year.

What Is the Background to Current Debates about Curriculum Reform in World History?

In 1963, world history was the second most commonly taken high school social studies course. Although called "world" history, the course dealt almost exclusively with Western political history, typically a chronological survey of the actions and contributions of great men.

By the mid-1970s, world history had fallen from favor. Most states and local school districts had dropped this decades-old requirement to give students greater academic freedom. Many schools offered alternative "world studies" courses, usually based on cultural geography.

The standard world history course also changed. By the end of the decade, more attention was being given to social history and the non-Western world. As a result, the threads of the old political survey were frayed. The course seemed to be a mish-mash of conflicting goals and unrelated content.

The movement toward academic rigor in the early 1980s gave new impetus to world history. The easiest way for most schools to respond to outside pressure was to re-establish the world history requirement. Today states as diverse as Kentucky, New Jersey, Arkansas, and Oregon have some kind of tenth-grade world studies requirement, but the shape of that course differs greatly from one place to another. The once uniform image of "world history" no longer exists.

The current confusion about world history courses reflects conflicting beliefs about the kind of history we should teach. The debate focuses on the place of

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* Robert B. Woyach is a Senior Faculty Associate of The Mershon Center, The Ohio State University.

non-Western history, the importance of social history, and the value of the continuous chronological survey.

Should Teachers Emphasize the History of the West or of the World?

The world history that emerged during the 1970s was not a "world" history at all. It was a poorly integrated amalgam of regional histories fitted uncomfortably into the chronology of the West. As a result, the added material exacerbated age-old problems of coverage. By the mid-1980s, many observers recognized the need for a better conceptualization (Alder and Downey 1985).

In part, because of the lack of an agreed-upon, integrated view of "world" history, there has been a renewed support for the teaching of Western civilization in recent years. The appeal of the Western civilization approach lies in its familiarity. The majority of American political and social institutions also find their origins in the Western experience (Gordon 1989; Gagnon 1987). Some curriculum reformers have gone further, arguing that students must know their own culture before they can appreciate other cultures.

On the other side are those who argue that a changing world requires that students have a broader experience than the Western civilization course can provide. We live in a world no longer dominated by the West. Increased immigration from Asia and Latin America has added new sources of diversity to culture in the United States. To the extent that the study of Western civilization encourages a narrow ethnocentrism, it may prove dysfunctional in preparing students for life in the future.

The debate over Western versus world history may have become overly polarized. Historian Michael Gordon argues that Western history must be seen in the context of world history. For better or worse, the West has given impetus to the modern world. Thus Western history must play a central role in any meaningful approach to modern world history.

Should Social or Political History Be Emphasized in the Curriculum?

The addition of material on women, minorities, and non-governmental affairs during the 1970s fit a general movement to make world history more relevant. It also coincided with the trend toward social history. New historical studies looked at the role of women in the Middle Ages and the French Revolution. The industrial and scientific revolutions became as, or more, important a focus for study as the political revolutions, wars, and alliances of the old political history.

While social history may have made world history more relevant, it also has made it more complex. Paul Gagnon (1987) notes that the trend toward social history threatens a key goal of the course: to help students appreciate the struggle for democracy. As the goals of world history multiply, the ability of the course to address any one of them adequately declines.

Gagnon's point is well taken, especially given the general importance of citizenship education in American schooling. At the same time, the distinction between social and political history may be overdrawn. Political history has traditionally been defined in terms of the progression of dynasties and regimes, wars, and the policies of governments. However, true political history cannot be bounded in this way. The rise of democracy—the democratic revolution in broad terms—is not simply the story of governmental institutions, laws, and documents. It is the story of ideas, and of institutions such as slavery. It encompasses workers' rights, civil rights, and women's rights—fought not only in the governmental arena but in the social and economic arenas as well.

Likewise, the key processes of political history play themselves out in societies as a whole. The French Revolution, for example, can be looked at from the perspective of kings and conventions. It can also be looked at from the viewpoint of common people. In both cases, the lessons can be the same, but the latter perspective may be more meaningful to students.

Should World History Teachers Use the Survey Approach?

History is traditionally equated with the continuous chronological survey. Matthew T. Downey (1985, 11) summarizes the typical viewpoint:

> The people and events of the past can only be understood when viewed within the larger context in which they existed. That is not possible when historical events or topics are isolated and extracted from the web of historic time to serve some other curricular purpose. The value of history also depends upon the chronological presentation of events through time. It is only through a chronological survey that students can begin to understand the process of social and cultural change, which is one of the principal purposes of history.

Actually chronology operates at different levels in history. The different levels can be thought of in terms of a complex chain. At the most basic level, the chain is made up of links, each of which is a distinct "story." Many links, hooked together, constitute strands that are "stories" in their own right. The rise of democratic institutions is one such strand. These strands, twisted together, make up a still larger story—the story of world history.

Ideally, in a survey course, students understand the links, the strands, and the chain as a whole. It is only in seeing the strands and the chain that students really see the "process of social and cultural change." Unfortunately, research on historical learning raises serious questions about our ability to achieve this ideal. Because of the emphasis on coverage and memorization that survey courses encourage, real historical thinking skills are generally not taught (Downey and Levstik 1988). The larger stories that give meaning to history also tend to be neglected.

World history can be taught both discontinuously and chronologically. Reilly (1989) outlines one approach to a discontinuous history survey. Similarly, some

major elements of a chronological survey (e.g., the urban revolution, the Age of Rome, the Industrial Revolution) could be treated thematically, but in chronological order. Such a course would not pretend to tell all of "world history" but may well achieve the ideal: a more than superficial understanding of some of the major turning points of the past.

Should World History Be Taught in a Single Year?

In recent years, recommendations for history reform have called for the teaching of world history over more than one year. The Bradley Commission (1988) outlined four posible sequences for world history, each involving at least two years of instruction. In their assesssment of history learning, Ravitch and Finn (1987) point to the new California Social Studies Framework, which mandates world history at the sixth, seventh, and tenth grades.

Teaching world history over multiple years is an ideal, but it may be difficult to implement. The California framework is based on assumptions about the capacities of sixth- and seventh-grade students to retain a knowledge of ancient and medieval history to provide a basis for learning modern history in the tenth grade. Most of the Bradley Commisssion's suggestions, alternatively, place world history (or a combination of world and Western history) in ninth and tenth grade. Here the major question is whether schools faced with budgetary constraints, will implement a two-year history sequence, or simply break world history into a multi-course sequence and require students to take one course. The latter option would hardly achieve the historical survey presumed to be necessary.

A multi-year world history sequence will soon become as full and as frustrating as a single-year course, if it is taught with the same emphasis on facts and coverage. In short, no matter the time devoted to world history, we cannot escape the question of what kind of history to teach and what priorities to have in selecting and treating content.

REFERENCES AND ERIC RESOURCES

The following list of resources includes references used to prepare this Digest. The items followed by an ED number are in the ERIC system and are available in microfiche and paper copies from the ERIC Document Reproduction Service (EDRS). For information about prices, contact:

EDRS
3900 Wheeler Avenue
Alexandria, Virginia 22304 telephone numbers 703-823-0500 & 800-227-3742.

Entries followed by an EJ number are annotated monthly in CIJE (Current Index to Journals in Education), which is available in most libraries. EJ documents are not available through EDRS; however, they can be located in the journal section of most libraries by using the bibliography information provided below.

Alder, Douglas D., and Matthew T. Downey. *Problem Areas in the History Curriculum.* In History in the Schools, Matthew T. Downey, ed. Washington, DC: National Council for the Social Studies, 1985. ED 254 477.

Bradley Commisssion on History in Schools, Building a History Curriculum: Guidelines for Teaching History in Schools. Washington, DC: Educational Excellence Network, 1988. ED number will be assigned.

Downey, Matthew T., and Linda S. Levstik. *Teaching and Learning History: The Research Base.* Social Education (September 1988): 336-342. EJ 378 161.

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Gagnon, Paul. Democracys Untold Story: What World History Textbooks Neglect. Washington, DC: American Federation of Teachers, 1987. ED 357 591.

Gordon, Michael. *A Western Civilization Approach.* In Approaches to World Studies: A Handbook for Curriculum Planners, Robert B. Woyach and Richard C. Remy, eds. Boston: Allyn and Bacon, 1989: 61-93.

Ravitch, Diane, and Chester E. Finn, Jr. What Do Our 17 Year-olds Know?: A Report on the First National Asssessment of History and Literature. New York: Harper and Row, 1987.

Reilly, Kevin. *A World History Approach.* In Approaches to World Studies: A Handbook for Curriculum Planners, Robert B. Woyach and Richard C. Remy, eds. Boston: Allyn and Bacon, 1989: 19-59.

Woyach, Robert B., and Richard C. Remy. *Strengthening World Studies: The Challenge of Conceptualization,* Social Education 52 (November/December 1988): 484-488. EJ 382954.

Source: Reprinted from *ERIC Digest*, EDO-S089-7, September 1989, Clearinghouse for Social Studies/Social Science Education, 2805 East Tenth Street, Suite 21220, Indiana University, Bloomington, Indiana 47405 (812) 855-3838.

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Beirut used to be called the "Jewel of the Mediterranean", but now it has turned into a city of contradictions. At times of peace it becomes the liveliest and the most active town, but at times of war the noise of bombs and bullets and smoke fill the air; ambulances rush everywhere people stay home in shelters. My picture however is about Beirut at times of peace.

My picture is a busy street in Beirut; there are all kinds of buildings and places of worship. Some people sell fruits and vegetables on their wheelbarrows and carts. All the stores are open; there's a generator in front of every shop. As usual there's heavy and irregular traffic, the street is full of people who talk in a loud voice, some boys play football in the street; some children come back from school. A group of militia men in a range rover armed with huge guns pass at great speed. Far away we see the sea, the white mountain of Saninne; we can also see on the hills the smoke of many factories.

Indeed Beirut is a very happy city at times of peace.

Peacetime Beirut

Daniel Dadoyan
Age 12
Lebanon

Chapter 2

Student Objectives

The basic purpose of social studies education is to prepare young people to be rational, humane, participating citizens. Social studies serves as the basis for students to understand their relationships and responsibilities to people, to institutions, and to the environment. It equips young people with the knowledge of the past that is necessary to cope with the present and to plan for the future, and it provides them with skills for productive problem solving and decision making, as well as for assessing issues and for making thoughtful value judgments. Above all, social studies is the integration of knowledge, skills, and values into a framework that is necessary if the individual is to participate responsibly in the school, the community, the nation, and the world. (New Jersey Department of Education, World History/Cultures Curriculum Guide)

The Sustainable Development Curriculum Framework operationalizes this basic citizenship education purpose of the social studies. It provides practical resources for teachers to infuse a cutting edge global concern into their course of study, whether it is based on an approach described as world history, world cultures, world geography, global studies or international relations.

The writers of this book acknowledge that current social studies debates center on each of the four basic questions of the field: what, why, how, and even when. We are aware of major criticisms of social studies as being boring and taught mostly in a teacher-dominated, passive learning mode. We also recognize that a majority of high school social studies teachers have been formally trained as chronologically-oriented history teachers.

We, therefore, have selected and developed resource materials that can be used by both chronologically-oriented and conceptually-oriented teachers. We

have included materials that speak to students' varied learning styles, and we encourage all teachers to select activities that will expand their repertoires of teaching strategies.

These resources reflect a global perspective, and we hope that this perspective becomes clear to students as they explore the concept of sustainable development. With such a global perspective, students will look at issues from the standpoint of multiple perspectives, including their own personal ones. Students will develop cross-cultural awareness and investigate the world as an interdependent, dynamic system. Students will also become problem-solvers as they explore various choices that can lead to alternative futures. The following student objectives should be read within this context of a global perspective.

STUDENT OBJECTIVES

As a result of studying "sustainable development," students will be able to:

1. Define and use key terms and concepts from the field of development, including "sustainable development."
2. Compare and contrast theories of development as they arose historically and as they exist today.
3. Recognize stereotypic statements regarding development.
4. Analyze the geographic, environmental, social/cultural, political, and economic elements in development.
5. Investigate and then evaluate a development issue within its historical, cultural, and geographic context.
6. Formulate and investigate sustainable development-related questions when studying world history, world cultures or global studies.
7. Participate individually and/or collectively in making decisions and taking social action.

In closing, we quote William D. Ruckelshaus, former Administrator of the United States' Environmental Protection Agency and a member of the World Commission on Environment and Development:

> *...the Commissioners wanted to speak to the young in particular, for it is they who have the greatest stake in the decisions to be made over the next twenty years. It is the young who ultimately will find the ways to turn the concept of sustainable development into new policies, new institutions, and new norms of behavior to assure a better life for all in a healthier global environment.*
>
> *If we accept this challenge, and mobilize the best of our thoughts and energies and dreams to this cause, we can look forward with pride and anticipation to our common future.* (Sustainable Development: A Guide to Our Common Future)

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The Tibetan Yak

Migmar Dorjee
Age 11
India

Chapter 3

Methods for Infusing Sustainable Development in World History & Cultures Courses

There are many ways to infuse the treatment of sustainable development issues within a course on world history or cultures. Because world cultures courses tend to treat such topics directly, we have focused the following infusion methods primarily on the world history approach in which a chronological survey tends to be the norm.

We have identified twelve methods for infusing sustainable development in World History/Cultures courses. It has been helpful and thought-provoking to us to organize the methods according to four categories that James Banks has used to describe how ethnic content has been integrated into the curriculum since the 1960s. The four *categories* or *levels* are:

> **Level 1: The Contributions Approach**, which focuses on heroes, holidays, and discrete cultural elements;
>
> **Level 2: The Additive Approach**, in which content, concepts, themes, and perspectives are added to the curriculum without changing its structure;

Level 3: The Transformation Approach, in which the structure of the curriculum is changed to enable students to view concepts, issues, events, and themes from different perspectives; and

Level 4: The Social Action Approach, in which students make decisions on important social issues that they have studied and take actions to help resolve them.

Banks sees these four levels* as a continuum that requires greater commitment to the goals of curricular change as one moves from one level to another. However, he affirms the pragmatic point that any of the levels provides an opportunity for a person to enter the process.

Similarly, we do not expect very many teachers to be ready or able to embrace all twelve methods for infusing sustainable development in world history or world cultures courses all at once. We invite you to consider which methods and levels are appropriate for you at this time and encourage you to approach the infusion task as an ongoing process.

At the end of this Chapter you will find a summary chart of the four levels and twelve methods for infusion, which can be used as a transparency or handout for faculty development workshops.

Level 1: The Contributions Approach

Focuses on heroes, holidays, and discrete cultural elements.

1. **Focus on sustainable development topics for special events.**

   Such special events could include World Food Day (October 16th), United Nations Day (October 24th), National Geographic Awareness Week (in November), Human Rights Day (December 10th), World Health Day (April 7th), Earth Day (April 22nd), World Environment Day (June 5th).

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* For a fuller discussion of Banks' explanation of the 4 levels, especially as regards their original use with ethnic content in the curriculum, please see James A. Banks et al., Multicultural Education: Issues and Perspectives. Boston. Allyn & Bacon, 1989.

2. **Discuss such topics within current events.**

   Many teachers allocate at least one period a week to current events. One can assign sustainable development topics for students to look for. If, however, you do number 8 below, students themselves will most likely bring in articles on related topics.

Level 2: The Additive Approach

Content, concepts, themes, and perspectives are added to the curriculum without changing its structure.

3. **Include in-depth treatment of sustainable development issues when teaching the contemporary world, and intentionally allocate sufficient time to the contemporary period.**

   The most obvious approach for teaching about sustainable development is for the classroom teacher to include in-depth treatment of these issues when treating economic, social and political development and environmental issues in the contemporary world. This Curriculum Framework contains numerous references to materials that are currently available to provide such treatment.

   The pedagogical issue then becomes *how does the teacher assure sufficient time to cover these items in the typical world history survey course without getting squeezed in the end-of-the-school-year crush?* The answer is relatively simple—*intentionally allocate the time within one's course outline.* One approach utilized by some of our piloting schools has been to assign the amount of time that will be given to such periods of history, starting from the end of the school year and working toward the beginning of the year. In such cases, the teachers have allocated the entire fourth (and final) marking period for such treatments. The consequences of such a decision mean that earlier periods must be telescoped into fewer days' coverage than previously done, but the teachers have determined their priorities and have made the decisions on time and allocation that follow.

4. **Sensitize your students to the relevant biases and perspectives of writers, especially textbook writers.**

   We all have assumptions about such things as human nature, the nature of the world, and what makes up the "Good Life." Unexamined assumptions about such value-laden areas exert a strong influence

both on what questions we pose to our students, as well as on what answers we will accept. In short, we all have unintended biases. Since one major objective for teaching World History/Cultures is to reduce students' biases, we strongly suggest that you *sensitize your students to writers' biases and perspectives,* especially the course's textbook writers. Students can compare the treatment of selected topics in several different textbooks and generate hypotheses as to the reasons for the differences. You might also use such class activities as *What's In A Name?* in Chapter 4. The *Analytical Framework for Sustainable Development* in Chapter 5 could be used to analyze the textbook writers' perspective or biases as well.

5. **Subscribe to up-to-date primary resource materials on sustainable development for the school library.**

   A useful supplementary action on the teacher's part is to make sure that students have *access to up-to-date primary resource materials in the school library.* A listing of such free materials and their sources is found in Chapter 8.

6. **Utilize local community resources to help students make local-global and historical-contemporary connections.**

   Local community resources can include a class trip to a garbage dump, recycling center, manufacturing plant utilizing recycled resources, or the local community or county planning board. These agencies and facilities are involved daily in decisions that affect the local use of resources, the impact of human activity on the environment, images of social progress and the good life, and the development of economic opportunities that will have significant impacts on this and future generations.

7. **Use existing lessons or units on sustainable development topics throughout your existing course outline, not just in the contemporary period.**

   Incorporate existing lessons or units within your existing course outline in order to cover sustainable development. The Curriculum Framework contains two types of resources to assist in this task of infusion. The first includes sample lessons in Chapter 4 developed by members of the project team in order to illustrate what traditional lessons might look like once so infused. The second resource is the extensive annotated listing of classroom lessons from existing supplementary materials and can be found in Chapter 5. Many of these materials can be used as is,

although some do require modest adaptations to be appropriate for sustainable development concerns.

Level 3: The Transformation Approach

The structure of the curriculum is changed to enable students to view concepts, issues, events, and themes from different perspectives.

8. **Define the concept of sustainable development with your students and establish a rationale for dealing with it throughout the rest of the course.**

   In order to deal explicitly with *sustainable development* within the course, we strongly suggest that you *conduct one or more activities to define the concept for your students and establish the rationale for using it as an organizing concept in the course.* Several activities for doing so are included in Chapter 4, *Sample Lessons.*

9. **Incorporate specific learning objectives about sustainable development within each unit of the existing history curriculum.**

   Explicitly incorporate within one's existing course framework student objectives and corresponding learning activities that relate to the contemporary world. For example, such an objective might read: "While studying the changes in land ownership in England at the start of the Industrial Revolution, students shall compare and contrast contemporary land reform proposals for 'Third World' economic development." This level of specificity spells out ahead of time the kinds of comparisons that teachers make all the time for their students between a historical period and a contemporary example.

10. **Replace or supplement the course textbook's framework with the Analytical Framework for Sustainable Development.**

    The Analytical Framework for Sustainable Development *in Chapter 5 is a practical resource provided to assist students in analyzing textbook chapters, supplementary readings or case studies of particular cultures and historical periods.* You can select topics from the Analytical Framework to be analyzed in each chapter or unit; not all will apply in every chapter. You can also assign selected topics and specific questions to different students, or to different groups of students, for a particular unit or chapter. Topics can be assigned as research projects,

and the class can compile a comprehensive report reflecting the total Framework. It is pedagogically most effective to begin with students' initial questions and concerns. We have, therefore, included a blank outline of the Analytical Framework, as well, so you can incorporate student concerns within this approach.

11. **Begin the course (or a specific unit) with the contemporary world to set a context for treating sustainable development issues throughout the course.**

    One of the most fundamental rationales and justifications for teaching World History/Cultures is the premise that students' knowledge of these areas will enhance their abilities to make decisions and take actions in today's and tomorrow's world. It is, therefore, most appropriate to *set the contemporary context with the students before launching into a survey of* non-western *cultures or even before jumping back in time to a chronological history course.* It is the writers' conviction that it is imperative to make explicit the connections with contemporary problems that the educator sees in the study of world history and world cultures.

    The *Sustainable Development Curriculum Framework* contains several suggested activities for beginning one's course with the contemporary world. One approach is to start one's class by having students brainstorm important issues of the day, begin to categorize these issues, and generate questions about possible causes, potential consequences of inaction or various actions, and historical parallels, all of which become important ingredients for the rest of the course. One could proceed to the last units in the textbooks treating the post-World War II period or more contemporary world first, and then either go to the traditional beginning of the course, or "post hole" specific topics or regions of the world.

Level 4: The Social Action Approach

Students make decisions on important social issues that they have studied and take actions to help resolve them.

12. **Students research possible options for taking action on sustainable development issues and undertake an action project as part of the curriculum.**

    Many existing opportunities for student action on such problems occur as extracurricular projects, e.g., supporting an economic development project in a "Third World" country, purchasing acres in a rainforest to prevent deforestation, writing letters to an elected official. *Chapter 9 contains a variety of possible actions for students to undertake as part of their coursework or as extracurricular activities, as well as a representative listing of resource organizations.*

Methods for Infusing Sustainable Development in World History & Cultures Courses

Level 1: The Contributions Approach

Focuses on heroes, holidays, and discrete cultural elements.

1. Focus on sustainable development topics for special events like World Food Day (October 16th), National Geographic Awareness Week (November), Earth Day (April 22nd), etc.

2. Discuss such topics within current events.

Level 2: The Additive Approach

Content, concepts, themes, and perspectives are added to the curriculum without changing its structure.

3. Include in-depth treatment of sustainable development issues when teaching the contemporary world, and make sure you allocate sufficient time to the contemporary period.

4. Sensitize your students to the relevant biases and perspectives of writers, especially textbook writers.

5. Subscribe to up-to-date primary resource materials on sustainable development for the school library.

6. Utilize local community resources, e.g., a class trip to a garbage dump, recycling center, manufacturing plant utilizing recycled resources, etc.

7. Use existing lessons or units on sustainable development topics throughout your existing course outline, not just in the contemporary period.

Level 3: The Transformation Approach

The structure of the curriculum is changed to enable students to view concepts, issues, events, and themes from different perspectives.

8. Define the concept of sustainable development with your students and establish a rationale for dealing with it throughout the rest of the course.

9. Incorporate specific learning objectives about sustainable development within each unit of the existing history curriculum.

10. Replace or supplement the course textbook's framework with the Analytical Framework for Sustainable Development.

11. Begin the course (or a specific unit) with the contemporary world to set a context for treating sustainable development issues throughout the course.

Level 4: The Social Action Approach

Students make decisions on important social issues that they have studied and take actions to help resolve them.

12. Students research possible options for taking action on sustainable development issues and undertake an action project as part of the curriculum.

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* The 4 levels are adapted from *Levels of Integration of Ethnic Content* in James A. Banks et al., Multicultural Education: Issues and Perspectives. Boston. Allyn & Bacon, 1989.

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The crown on the queen's head is elaborately decorated with human beings' heads and tiny hexagonal shapes. It has an oblong face, hollowed eyes, thick lips, a pair of ears, dropping chin and two long, wide facial tatooing marks which run parallel from the forehead to the bridge of the nose stopping sharply at the tip of the eyes.

It also has an elaborately decorated appendage that hinges from the loops of the ears. The shaded right hand side of the drawing is the shadow cast.

The Queen's Head

Maribel Brana Maribo
Age 10
Nigeria

Chapter 4

Sample Lessons
Introduction

The following eight lessons have been developed by members of the project team. The lessons are examples of classroom activities intended to introduce the concept of sustainable development or infuse elements of sustainable development within a typical lesson or unit.

Sustainable development issues require analytical, critical and creative thinking skills. The following sample lessons will appeal to a variety of learning styles as they call for the abilities to analyze data, clarify assumptions, compare and contrast, draw conclusions, and propose possible solutions to problems from often complex and even conflicting information. Such abilities lie at the heart of effective citizenship in a global age.

What's in a Name? deals with nuances associated with "development" language (page 4-3).

Values and Sustainable Development explores relationships between cultural values and economic development (page 4-11).

Introduction to Sustainable Development provides two historical overviews of attitudes toward the environment, leading up to current understandings of sustainable development (page 4-16).

Cultural Assumptions and Sustainable Development reflects on one formulation of North American assumptions concerning the relationship of human beings and the environment (page 4-24).

Africa and the Industrial Revolution examines the relationship of slavery and the Industrial Revolution—the issue of equity in economic development (page 4-27).

Worldviews of Development provides a multiple perspectives approach to economic development assumptions (page 4-39).

The Quality of Life and Sustainable Development introduces students to data analysis and social and economic indicators of the quality of life (page 4-60).

Decisions for a 'Developing' Nation engages students in a role play featuring allocation of limited financial resources within a "developing" nation (page 4-66).

What's in a Name?

PURPOSE

The purpose of this activity is to introduce the concept, "sustainable development," and to set a context for studying about it in this course. Particular attention is paid to value-laden terms associated with "development."

OBJECTIVES

As a result of this activity, students will be able to:

1. Define basic development vocabulary and recognize nuances associated with these terms.
2. Recognize stereotypic statements regarding development.
3. Formulate development-related questions for further study.

TIME REQUIRED

One class period.

MATERIALS NEEDED

Transparencies 2a and 2b, *Sustainable Development,*
copies of Handout 1, *Definitions,*
and writing paper.

Prepared by Jeffrey L. Brown, Global Learning, Inc., Union, NJ.

PROCEDURES

1. Instruct the class to divide a piece of paper into three columns and to label the columns: ***Positive, Neutral,*** and ***Negative***.

2. Tell the class: *Place each of the following words or phrases into one of the three columns on your paper, based on your first reactions.*

3. Read the list (or selected portions of it) allowing time for students to do the assignment.

develop	traditional
development	industrialized
underdeveloped	First World
overdeveloped	Second World
mal-developed	Third World
modern	sustainable development

4. Divide the class into groups of three.

5. Have each group compare their columns.

   A. *What images came into your minds as you heard these terms?*
   B. *What words or phrases need to be defined?*
   C. *Why did you place the words in the particular columns you chose?*

6. Conduct a total class discussion based on the results of the small group discussions.

   A. List the words and phrases that need to be defined. Ask for student definitions; clarify or correct as necessary.
   B. Write on the board words that represent the nuances the students expressed in relation to the development terms (e.g., good, great, dumb, awful, can't take care of themselves, becoming like us, different...).
   C. *How do these connotations affect the way we feel or think about ourselves or about other countries and groups of people when we see these terms in the news media or in our readings?*
   D. *Why would some writers use certain of these terms and not others?*

E. *How might you take these connotations into account as you study development topics?* (E.g., Try to use names for others that they use for themselves. Suspend judgment at least while we are trying to understand others from their standpoint. When making judgments about others, don't put them down for being different, but try to understand the reasons for the differences...)

7. Introduce the concept of "**sustainable development**."

   A. *What do you think of when we add the term* "sustainable" *to the word* "development?" *What would* "sustainable development" *look like if you saw it in operation?*
   B. *What would be examples of* "unsustainable" *development?*

8. Place Transparency 2a on overhead projector. The World Commission on the Environment and Development presented a report to the United Nations in 1986, entitled *Our Common Future.* Their definition of sustainable development and recommendations for world action on the concept are being accepted by leaders and ordinary people all over the world. They've defined **sustainable development** as "*...development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*"

   A. *How does this definition compare with what the class has brainstormed above?*
   B. *Where do you see examples of activities that are compromising the ability of future generations to meet their needs?*
   C. *What changes have been made in the past few years that are more likely to let us meet our needs while also ensuring the ability of future generations to meet their needs?*

9. Place Transparency 2b on overhead projector. *Our Common Future* also notes that sustainable development includes the following:

   A. The environment needs to be taken into account ahead of time, not as an afterthought. I.e., we must begin to include within the "costs" of doing something the **use of resources**, as well as the **impact on the biosphere**. Pollution is not a by-product anymore, but one of the anticipated outcomes to be taken care of. ["*Previously our main concerns centered on the effects of development on the environment. Today, we need to be equally concerned about the ways in which environmental degradation can dampen or reverse economic development.*" (Our Common Future, p. 35).]

B. Not just **economic** development, but also **social, cultural and political** development.

C. Including equity means that the goal of development is still the **elimination of poverty, hunger and human suffering.** [*"Poverty is not only an evil in itself, but sustainable development requires meeting the basic needs of all and extending to all the opportunity to fulfil their aspirations for a better life. A world in which poverty is endemic will always be prone to ecological and other catastrophes."* (Our Common Future, p. 8)

10. **Conclusion:** One of the assumptions in this course is the idea that all societies, all nations are "developing." We're all in the process. We will be looking at past societies, in part, to see how they met their needs and their wants, why they did it the ways they did, ...to see how they dealt with the relationships among these three essential factors (**environment, development** and **equity**), and especially to see what we might learn from these other examples to help us solve some of the world's problems we're facing today.

AN ALTERNATIVE PROCEDURE

The word association activity can also be conducted as a briefer, whole class exercise.

1. Ask: *What do you think of when you hear this word?* Go through the list quickly.

2. When appropriate, ask **why** they're making these associations.

DEFINITIONS

develop • Literally, to cause to grow gradually in some way; to cause to become gradually fuller, larger, better, etc.

development • In the field of international development, the process of improving the quality of human lives in many areas, including: income and consumption levels; social, political, and economic institutions; and freedom of choice. The term is sometimes used narrowly to mean economic growth.

underdeveloped • A comparative concept expressing a relationship of exploitation, i.e., some countries are economically "developed" because others are not.

overdeveloped • Also a comparative concept in which some countries are using more than their fair share of resources.

mal-developed • A country's state of development is having a negative—and possibly even an evil—effect on others' abilities to develop.

modern • Characteristic of the present or recent time.

traditional • Pertaining to, or derived from the past.

industrialized • Often used to refer to those countries whose gross national product comes primarily from industrial activity, not agriculture.

First World • The countries of western Europe, the United States, Canada, Australia, New Zealand and Japan, which have developed market economies.

Second World • The countries of eastern Europe, including the Soviet Union, which have had centrally planned economies.

Third World • The term came into use in the Cold War Era when it was applied to those countries committed neither to Communism nor to a Western system of government and hence had a primarily political connotation. "Third World" was originally coined in the early 1960's by French demographer Alfred Sauvy in reference to the role of the "Third Estate" in the French Revolution. "Third World" has come to refer generally to the nations of Africa, Asia, Latin America, and Oceania and has taken on a primarily economic connotation.

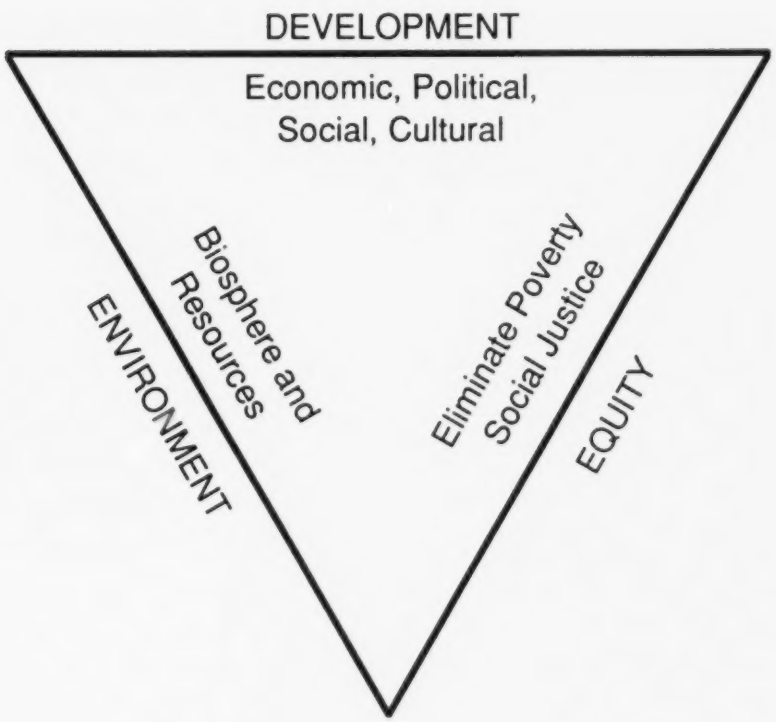
sustainable development • Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

SUSTAINABLE DEVELOPMENT

...meets the needs of the present

without compromising the ability of

future generations to meet their own needs.



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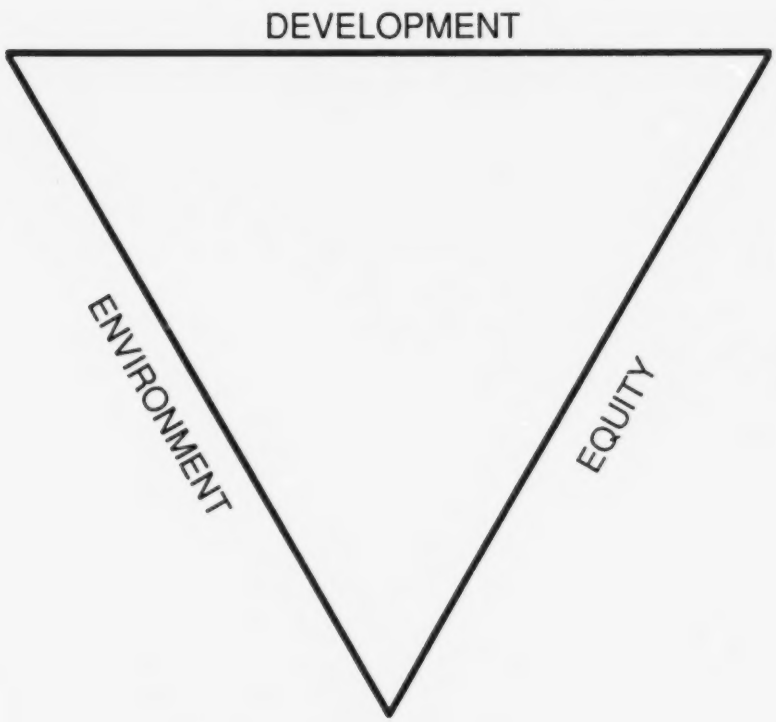

Economic, Political,
Social, Cultural
Biosphere and
Resources
Eliminate Poverty
Social Justice

Values and Sustainable Development

SUSTAINABLE DEVELOPMENT TOPIC

Cultural Development

LESSON OBJECTIVE

To understand how the values held by the people in a society may either help or hinder the economic development of this society

MATERIALS NEEDED

One copy of Handout 3 *(VALUES AND ECONOMIC DEVELOPMENT)* and Handout 4 *(SOURCES OF VALUE STATEMENTS)* for each student

TIME REQUIRED

1 to 2 class periods

PROCEDURES

1. Distribute Handout 3 to the class and explain that the statements represent values some people hold. Do not show the origin of any of the statements at this time.

2. Have the students read through the "Values and Economic Development" list and put a:

   \+ in front of the values with which they agree;
   — in front of the values with which they disagree;
   o in front of the values on which they have no opinion.

3. As a group, go through the list and discuss the meaning of each statement.

4. Have the students explain why they agree or disagree with the statements.

Prepared by Thomas Crop, Bridgewater-Raritan School District, NJ.

5. Ask which statements appear to reflect our society and which reflect other cultures.

6. Analyze the statements to determine which would reflect values that might either assist or hinder sustainable development.

7. Share with the class the origins of the statements (Handout 4).

8. Evaluate #6 in light of the information in #7.

EVALUATION

Discuss with the students their feelings about any relationships between values and economic development.

An Interpretation of the Value Statements

1. This is a statement of survival of the fittest. It implies that God chooses those who are worthy. A person who believes this would feel that some people would not develop economically because they were not worthy.

2. Having many children is a sign of being a man. A person who believes this would not favor any attempts to limit population.

3. We should prepare today for the needs of tomorrow. This person plans for the future.

4. This person believes that preparing a person to take care of himself/herself is more important than simply feeding the hungry.

5. This statement implies that hunger is a cause of war.

6. A society will emphasize those things that are important to its culture.

7. This statement implies an obligation by the rich to help the poor.

8. This statement implies that fate is very important in the direction that one's life will go.

9. This statement implies that what we need to survive is small. It also implies that we want more material things than we need.

10. This statement implies that government should permit private business to operate without many government restrictions.

11. This statement implies that seeking material wealth is the cause of most of society's problems.

12. This statement implies that being poor is the cause of most of society's problems.

13. This statement implies that even though Europeans have solved the problem of production, there are still great disparities in wealth.

14. This statement implies that a person does not have control over these things in his/her life.

15. This statement implies that a person should have many children.

16. This statement implies that many things in life are controlled by God.

17. This statement implies that hard work is good for a person.

18. This statement implies that the male was not meant to farm, rather he is to be a warrior.

19. This statement implies that a person should know his/her status in society and should act accordingly.

20. This statement implies that there should only be 1 leader for any task.

21. This statement implies that if a person has everything given to them, there will be no incentive to improve.

22. This statement implies that fate is very important and that many things are beyond a person's ability to solve them.

23. This statement implies the important role of women in educating the children of a society because of woman's role as primary care-giver.

VALUES AND ECONOMIC DEVELOPMENT

1. "Life is but a savage test
Of who is least and who is best.
Those who fall must lack the wit;
The winners are the ones most fit.

It may seem harsh, but shun the whine.
Take in your breath and toe the line.
There'll always be the ones who lose;
'Tis for God, not us, to choose."

2. "A man with a large family is a real man."
3. "It is thrifty today to prepare for the wants of tomorrow."
4. "If you give a man a fish, he will have a single meal. If you teach him how to fish, he will eat all his life."
5. "You can't build peace on an empty stomach."
6. "Development is broadly culture dependent. Progress is based on what is considered important, and this depends on culture."
7. "If a free society cannot help the many who are poor, it cannot save the few who are rich."
8. "Great possessions depend on fate, small possessions come from diligence."
9. "Our necessities are few, but our wants are endless."
10. "Government (should) provide a stable and unfettered environment in which private individuals can make appropriate decisions."
11. "The love of money is the root of all evil."
12. "The lack of money is the root of all evil."
13. "The white man knows how to make everything, but he does not know how to distribute it."
14. "Wife, wealth, children, and salary are all predestined."
15. "May you live long and beget eight children."
16. "God wills it."
17. "Hard work is good for the soul."
18. "Man was not meant to burrow in the dirt like an animal."
19. "If you are the peg, endure the knocking; if the mallet, strike."
20. "Two captains sink a ship."
21. "A full stomach will never learn."
22. "What is brought by the wind will be carried away by the wind."
23. "Educate a man and you educate one person, educate a woman and you educate a nation."

SOURCES OF VALUE STATEMENTS

1. American businessman of the 1880's
2. Juan de la Cruz, resident of Santo Domingo, Dominican Republic
3. Aesop's Fables, "The Ant and the Grasshopper"
4. Chinese proverb
5. Norman Borlaug, Nobel Peace Prize Winner, 1970
6. Joseph Olspaku, Nigerian writer and publisher
7. President John Kennedy, Inaugural Address 1961
8. Chinese proverb
9. Inscription on a fortune cookie
10. Ronald Reagan's first economic message to Congress
11. New Testament
12. George Bernard Shaw
13. Sitting Bull
14. Chinese proverb
15. Traditional Hindu wedding blessing
16. If you substitute "Allah" for "God," this is an Islamic statement
17. Protestant work ethic
18. African work ethic
19. Russian proverb
20. Japanese proverb
21. Armenian proverb
22. Persian proverb
23. African proverb

Introduction to Sustainable Development

PURPOSE

Students will examine and analyze development through the introduction of sustainable development. The students will view development through an ecosystem approach that redefines development.

OBJECTIVES

1. Students will be able to describe environmental consciousness in traditional, early industrial and mature industrial societies.
2. Students will compare and contrast the traditional, early industrial, and mature industrial societies' care of the environment.
3. Students will examine examples of the evolution in thinking from egocentric to ecosystem management styles in caring for the environment.

TIME REQUIRED

One to two class periods per activity

MATERIALS NEEDED

Handout 5, *SUSTAINABLE DEVELOPMENT: A NEW PERSPECTIVE ON THE ENVIRONMENT*, for Activity 1;

Handout 6, *SUSTAINABLE DEVELOPMENT: THE ECOSYSTEM APPROACH*, for Activity 2;

Video, *Our Common Future*, for Activity 3 (To order, see Chapter 8, Audiovisuals)

Adapted by Marie Varley, Church World Service/CROP, Newark, NJ, from *Environment and Development Issues and Trends*, File 10 Environment First, The Idea of Sustainable Development, The Common Heritage Programme, Published by Teachers' Press, Ottawa, Canada, 1988.

PROCEDURES

Activity 1

1. Assign the reading of Handout 5; or divide the class into three groups and have each group read one of the sections from Handout 5: "Environment Consciousness in Traditional Societies—We are one with it," "Early Industrial Consciousness—Keep it clean," and "Mature Industrial Consciousness—Manage and Protect it."

2. Ask the following questions of the class:

   A. Did traditional societies see themselves as "shapers" or "makers" of the environment? Explain.

   B. What makes early industrial societies different from traditional societies?

   C. What demonstrates that early industrial societies saw the environment as a vast storehouse?

   D. Summarize the essence of the change in attitude from pre- to postindustrial consciousness.

   E. What realization marks the mature industrial societies from the previous era?

   F. In this society, "the desire to manage" the environment is important. How can "management" be successful in "preserving and protecting" the environment?

   G. Is the worldview described in the traditional society applicable today? How?

   H. A fourth stage has been called the "postindustrial society." Sum up the qualities of this stage.

Activity 2

1. Assign the reading of Handout 6.

2. Ask students to identify one example of the four stages of evolution, from egocentric to ecosystem management.

3. Ask students to add to the list of examples from egocentric to ecosystem management.

4. Ask the following questions of the class:

   A. In what ways is "environment" different from "ecosystem"?

   B. What are some of the changes humans have to make to fit the ecosystem approach?

   C. This reading suggests nine examples of an ecosystem approach to environment problems. What is the new ingredient in each?

Activity 3

1. Before showing the video, tell the students as they watch it to jot down on a piece of paper the problems it mentions (e.g., ozone depletion, destruction of the rainforest, etc.)

2. Show the 12 minute version of the video *Our Common Future.*

3. Discussion questions:

   A. What objects or images stand out in your mind from the video? (For example, a machete or fire. This objective kind of question can be used to get a lot of students participating.)

   B. What are some of the problems that the video discusses? (Write the problems all over the board.)

   C. According to the video, how are these problems connected with one another? (Draw lines from one to another to show these connections.)

   D. What does the video propose as a solution to all these interconnected problems? (sustainable development)

   E. Who came up with the idea of "sustainable development?" (the World Commission on Environment and Development of the United Nations)

   F. What is the definition of "sustainable development" given in the video?

G. What are some of the things you've heard recently that people are doing to deal with these problems so that future generations *will* have a chance to meet their needs?

H. To bring closure to this discussion, you might acknowledge that the images used in this video to describe the global problems are more powerful than the images used to discuss the possible solutions. This video and discussion are just a beginning to our study of the broader concept of "sustainable development."

Teacher Background Materials

1. Commins, Stephen, *Sustainable Development: Sustainable Concept,* in Chapter 11.

2. Preview the video *Our Common Future* (12 minute version).

SUSTAINABLE DEVELOPMENT: A NEW PERSPECTIVE ON THE ENVIRONMENT

Environment Consciousness In Traditional Societies—We are One with It

Our journey begins with our forefathers in preindustrial societies. In such societies, men and women do not experience "the environment" as something separate and apart. For them, rather, life is integrated. They are at one with the cosmos and hence the environment. The divisive sense that distinguishes human beings from the environment, which is the mark of an industrial culture, has not yet arisen.

In traditional societies, human beings live their lives within a sacred and unchanging created order, given to them by the Creator Spirit. The world is simply the way things are, have been and always will be. It is unthinkable that it could be substantially different, and a fundamental and lasting change is inconceivable. To the Plains Indians, treaties were to be kept "as long as the grass grows and the rivers flow," which is to say...forever. It was unthinkable that the soil would not support grass or that the rivers would ever cease to flow....

Early Industrial Consciousness—Keep It Clean

An industrial consciousness of the world segments and divides that which preindustrial consciousness sees as whole. It regards the environment as something apart, and nature as external to human beings. Nature thus becomes an object to be used, exploited and manipulated—there for humans to do with as they will.

In early industrial societies there is only a limited sense that the environment needs to be cared for; that if one is not careful, the landscape can be covered in garbage. So garbage piles up...everywhere. Early industrial societies learn to care for the environment as they gain experience with the creation and disposal of garbage. They learn that the environment should be kept clean. But early industrial consciousness does not create departments of the environment. Rather, it leads to sanitation departments and bylaws against littering.

It is not yet conceivable in an early industrial society that the riches of the environment need to be managed, much less protected and conserved. Ore is to be found and mined, trees are to be cut and lumbered. Tomorrow will take care of itself because the supply is virtually inexhaustible.

Until very recently this early industrial consciousness was the norm in Canada. ...But history moves on.

Mature Industrial Consciousness—Manage and Protect It

In the second stage of industrial development, the third stage overall, it dawns on us that continuous exploitation of the environment is not possible. Fishing stocks can be fished out; soil can be depleted; forests, if not replenished, disappear. The mature industrial stage, then, inherits from early industrial society the sense that the environment is external and can be manipulated. Now, however, the desire to manage and protect the environment comes to predominate.

A mature industrial consciousness seeks to manipulate the environment in such a way that it can always provide continuous use. One not only talks of farming in the old conventional sense, but of farming the forests and harvesting oceans. We learn that there are limits to our exploitation. The environment and its resources need to be protected from undue exploitation—an unthinkable concept in a preindustrial or early industrial society.

The Environment is Not What It Used to be, by Rubin Nelson, Environment Update, ENVIRONMENT CANADA, March 1984.

Reprinted with permission from E.D.I.T. File 10, Environment First: The Idea of Sustainable Development. The Common Heritage Programme, 200 Isabella Street, Suite 300, Ottawa, Ontario, Canada K1S 1V7.

SUSTAINABLE DEVELOPMENT: THE ECOSYSTEM APPROACH

Ecosystems are natural or artificial subdivisions of the biosphere with boundaries arbitrarily defined to suit particular purposes. It is possible to speak of your personal ecosystem (you and the environment on which you depend for sunshine, air, water, food, and friends), the Great Lakes basin as an ecosystem (interacting communities of living and nonliving things in the basin), or our planetary ecosystem, the biosphere....

There is a simple, yet profound difference between "environment" and "ecosystem." The notion of environment is like that of **house**—something external and detached. In contrast, ecosystem implies **home**—something we feel part of and see ourselves in even when we are not there. A home has an added spiritual dimension that makes it qualitatively different from a house. It is a happier place because of the caring and sharing relationships among its inhabitants.

The emergence of an **ecosystem approach** to planning, research, and management in the Great Lakes basin is not accidental. It is the most recent phase in a historical succession of management approaches from **egocentric** to **piecemeal** to **environmental** and now to an **ecosystem approach**. This succession arose from stresses imposed by the burgeoning growth of population and technology in the Great Lakes basin. The ecosystem approach emerged in the 1970s with the realization, in part from the discovery of toxic chemicals in human food chains, that people and environments can only be managed effectively in relation to ecosystems of which they are parts....

Some examples of the evolution from indifferent to ecosystem management styles may help to clarify what is meant by ecosystem approach and to show the extent to which it is now in development:

Organic waste. First it was dumped wherever convenient—best of all in streams or lakes. Next, because of downstream problems, we developed energy-consumptive sewage treatment systems. Now, an ecosystem approach focuses on recycling energy efficiently, and material recovery from sewage.

Eutrophication. First, it was ignored. When the odors became too strong, nutrient-rich effluents were diverted downstream. Then phosphorus was removed from sewage effluents. An ecosystem approach promotes low-phosphate detergents, more efficient use of fertilizers, and nutrient recycling.

Oxides related to acid rain. At first the pervasiveness of the acid rain problem was not recognized. When problems arose locally, the "solution" was to build taller smokes stacks. Then came removal of acids by scrubbing.

Now, an ecosystem approach advocates energy conservation and the recycling of sulfur.

Water diversions and consumptive uses. The first rule was to divert, the more the better. Then the scale of operations was increased to meet new shortages, encouraging export as a commodity. An ecosystem approach might recommend diverting water sparingly—and only in the context of overall regional planning. It might also set limits on overall use or provide incentives for nonconsumptive uses.

Cancer. People were never indifferent to cancer; however, it is still commonly viewed in terms of single causes. In an ecosystem approach, real cures (prevention techniques) must be based on the knowledge that cancer is to a large degree environmental, with many contributing causes.

Toxic chemicals. At first, toxic chemicals were used indiscriminately. Then they were dealt with one by one with regulations after the fact, as in the case of pesticides. An ecosystem approach requires designing with nature, particularly for long-lived compounds.

Energy shortages. Successive "solutions" were, first, to ignore the problem, then to increase the energy supply and expand the grid with pricing to encourage greater use. An ecosystem approach encourages conservational pricing with inverse rate schedules to discourage greater use.

Traffic congestion. Successive "solutions" have been to curse, build more roads and superhighways, improve public transportation, and stagger commuters' work hours. An ecosystem approach might encourage a broader look at commuters' work and travel needs and at overall land use planning. Solutions then might include greater use of telephones and computer terminals or the development of new combinations of work, shopping, and residential population clusters.

Pests. At first it was "run for your life." Then came broad-spectrum pesticides. Next were selective, degradable poisons. An ecosystem approach calls for integrated pest management.

The Ecosystem Approach to Managing Human Uses and Abuses of Natural Resources in the Great Lakes Basin, by J.R. Vallentyne, A.M. Beeton, Great Lakes Laboratory for Fisheries and Aquatic Sciences, DEPARTMENT OF FISHERIES AND OCEANS, 1986.

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Cultural Assumptions and Sustainable Development

PURPOSE

Students will explore some culturally-based assumptions about relationships between human beings and the environment in order to clarify their own values and their understanding of the concept of "sustainable development."

OBJECTIVES

Students will be able to:

1. Define such key terms and concepts as "cultural assumptions," "resources," "material standards of living," "success", "freedom."
2. Analyze social/cultural and economic elements in development.
3. Formulate and investigate development-related questions for further study.
4. Make judgments on value statements, expressing agreement and disagreement.
5. Clarify their understanding of one interpretation of a "Western" perspective on human-environmental interactions.
6. Rewrite some of the value statements to reflect the students' understanding of the concept of "sustainable development."

TIME REQUIRED

One class period or less

MATERIALS NEEDED

Handout 7, *Cultural Assumptions and Sustainable Development*
and Writing paper

Prepared by Jeffrey L. Brown, Global Learning, Inc., Union, NJ. Source of cultural assumptions: Larry L. Rasmussen, *Starting Over*, Union Theological Seminary Newsletter, New York City, Spring 1989.

PROCEDURES

1. Divide the class into small groups of twos or threes.
2. Distribute Handout 7.
3. Tell the students to complete the first 3 steps in the directions individually.
4. When they have finished marking their lists, have students do the final step together in their small groups.
5. Debrief the total class by asking such questions as:
   A. *What are some of the statements with which you agreed? Disagreed?*
   B. *Where was there agreement or disagreement within your small groups?*
   C. *Let's hear some of the statements that you rewrote.*
   D. *How do these reflect the meaning of "sustainable development"?*

CULTURAL ASSUMPTIONS AND SUSTAINABLE DEVELOPMENT

We all have assumptions, but what is an assumption? An assumption is anything we take for granted, anything we accept as a fact without asking for proof.

As people have become more aware of problems in our environment, some have suggested the roots of these problems lie in cultural assumptions that many Americans (and others!) have never challenged. Here is one such listing of cultural assumptions about the relationship of the environment and human beings.

Directions

- Put a **+** by those with which you agree.
- Put an **o** by those with which you disagree.
- Put a **?** by those with which you are not sure if you agree or disagree.
- Pick **three** statements and **rewrite** them to more fully support the idea of *sustainable development*.

____1. Nature has a virtually limitless storehouse of resources intended for human use.

____2. Humanity has the right to use resources for an ongoing improvement in the material standard of living.

____3. The most effective way to assume the continuing improvement of material standards of living is through ongoing economic growth.

____4. The future is open; systematic material progress for the whole human race is possible; and through the careful use of human powers humanity can make history turn out right.

____5. Human failures can be overcome through effective problem solving.

____6. What can be scientifically known and technologically done should be known and done.

____7. The successful person is the achiever.

____8. Both social progress and individual interest are best served by competitive, achievement-oriented behavior.

____9. The diligent, hardworking, risk-taking, and educated will attain their goals.

____10. There is freedom in material abundance.

Africa and the Industrial Revolution

PURPOSE

This lesson on *Africa and the Industrial Revolution* may be incorporated in a unit on the Industrial Revolution. However, it may also be applied to units on Colonialism and Imperialism. The lesson is designed to be used selectively. Teachers are encouraged to use as much or as little of the material as desired.

OBJECTIVES

Students will understand that:

1. Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs.
2. The concept of equity is the principle of fairness and justice.
3. In order for sustainable development to be achieved, people must have an equitable share in the economic development and political activities of the society.
4. Lack of equity results in inequality.
5. The labor of African men and women contributed to the Industrial Revolution.
6. Slavery is related to the Industrial Revolution.
7. The Industrial Revolution economically "developed" Europe and the Americas as it economically "underdeveloped" Africa. (Walter Rodney's terms)
8. History provides an explanation for the technological and industrial "development" of Europe and the Americas and the technological and industrial "underdevelopment" of Africa. (Walter Rodney's terms)
9. The Industrial Revolution contributed to the dilemma of inequity in the contemporary world.

Prepared by Sara J. Talis, SMA Fathers, Tenafly, NJ.

TIME REQUIRED

2 to 5 days

MATERIALS NEEDED

Student text
Lesson plan on Africa and the Industrial Revolution
Handouts 8, 9, 10
Cotton balls
Large spool of thread
Piece of cotton cloth
Piece of cotton clothing, e.g., shirt, blouse
Transparencies of Handouts (optional)
Overhead projector (optional)

PROCEDURES

Background

Students will have studied the introductory part of a unit on the Industrial Revolution and will already understand why the Agricultural Revolution occurred in England and how inventions sparked the Industrial Revolution.

Introduction

Review: The Industrial Revolution has been defined as a "long, slow process in which production shifted from hand tools to machines and in which new sources of power such as steam and electricity replaced human and animal power." (Student text: Beers, p. 428)

During the first stage of the Industrial Revolution from about 1750 - 1850, Great Britain took the lead in shifting to new methods of production.

During the second stage, from the mid-1800's to about 1914, the nations of Western Europe and the United States developed into modern industrial powers.

The Industrial Revolution completely transformed the patterns of life in these regions as well as the patterns of life in other regions around the world.

Introductory Set

Display:

- cotton balls
- a large spool of thread
- a piece of cotton cloth
- a finished piece of cotton clothing

Objective:

Students will understand the relationship of these four items to the Industrial Revolution. Students will understand that:

- Cotton, symbolized by the cotton balls, was grown on the plantations of the United States and manufactured in American factories during the Industrial Revolution;
- Cotton was grown and collected by slaves who had been captured and taken from their homes in Africa and imported to the Americas during the 17th and 18th centuries.

Possible Discussion Questions Include:

1. How do the four items displayed relate to the Industrial Revolution?
2. Who grew and collected the cotton produced for the textile industries of the United States and Britain?

New Information

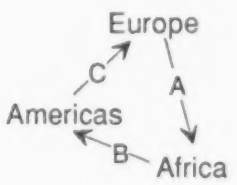
The teacher may incorporate as much of the new information as desired on *Africa and the Industrial Revolution* provided on student handouts.

Transparencies may be made from these handouts and displayed with an overhead projector.

The following basic outline of the new information may be put on the blackboard:

Outline

1. European capitalism set the Atlantic slave trade and slavery in the Americas in motion.
2. Throughout the 17th and 18th centuries, exploitation of Africa and African labor produced capital for Europe and the Americas.
3. The trade:
   - A. Sent cheap goods from Europe to West Africa in order to buy captives;
   - B. Sent African men and women to the Americas as slaves; and
   - C. Sent finished goods produced in America to Europe.



4. American economic development rested on the pivot of slavery.
5. In the 1830's slave-grown cotton accounted for approximately half the value of all exports from the United States.

AFRICA AND THE INDUSTRIAL REVOLUTION

Background

1. At first, slaves were used in Africa only when needed for household work.
2. This was true of East as well as West Africa.
3. There was no plantation system in Africa which could absorb large quantities of manual labour.
4. Little by little, Portuguese sailors took several thousand slaves a year to Europe for domestic labour.
5. Slave labour was familiar in medieval Europe.

The West African Slave Trade

1. Soon after 1492, the Spanish transported West African slaves across the Atlantic.
2. In 1510, sale of African slaves in the Americas was legalized by Spain.
3. A regular slaving system developed.
4. The system endured for 3 $^{1}/_{2}$ centuries.
5. Tens of millions of Africans were transported across the ocean.
6. The death of many other millions of African men and women was caused before their departure to the Americas.

The "discovery" of the Americas

1. Changed the face of Africa.
2. When America was "discovered" by the Europeans, slavery became a business.
3. Opening mines and plantations = hard, physical labor.
4. The American colonialists unsuccessfully attempted to enslave the peoples of the many native American nations.
5. Strong men and women were plentiful in Africa.
6. They were skilled in farming and mining and superior in these skills to native Americans as well as Europeans.
7. The slave trade began as a continuation of a tradition of accepted forms of labor.
8. And it developed into a complicated business of kings, rich men and merchants in the 1680's.

African Warfare

1. The enormous numbers demanded by the slave trade could only be provided through warfare.
2. Slaves were first captives.
3. African rulers collaborated with Europe in exploiting the peoples of Africa.
4. The demand for slave labor became insatiable.
5. Many African countries were completely depopulated.

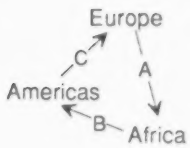
THE SLAVE TRADE

Inhumanity of the system

1. By 1650 the slave trade was in full stride.
2. Brutality increased.
3. Captives.
4. Individuals were bought according to size, strength, and handsomeness.
5. Revolts took place on board the slave ships.
6. The horrors of the voyages of the dead and dying are recorded.

The Triangular Slave Trade and Capitalism

1. The triangular slave trade linking Europe, Africa and America produced capital for Europe and the Americas.
2. The trade:
   - A. Sent cheap goods from Europe to West Africa in order to buy captives to be sold as slaves.
   - B. Sent slaves from Africa to the Americas in order to buy sugar, tobacco, and cotton.
   - C. Sent sugar, tobacco, and cotton from the Americas to Europe for cash.



3. The triangular slave trade supported the Industrial Revolution, especially through the textile industry.
4. The slave trade produced capital for Europe.
5. American economic development rested on the pivot of slavery.
6. In the 1830's, slave-grown cotton accounted for approximately half the value of all exports from the United States.

The Effects of slave trade on Africa

1. Resulted in the depopulation of the continent over 3-4 centuries through:
   - A. the deportation or
   - B. death of several tens of millions of Africans.
2. The families of these tens of millions of slaves were also affected.
3. African societies were deprived of their best producers, the youngest and strongest men and women, regularly over a long period.
4. Cheap industrial goods, mainly cotton, metalware and firearms, were exchanged for the "raw material" of African labor—African life.
5. Local production of cotton goods and metalware was undermined by flooding Africa with cheap substitutes.
6. Industrial expansion was severely hampered—even at the handcraft stage.
7. The trade may be seen as an early type of colonial economy of exchange of European goods for African raw materials.

EFFECTS OF THE SLAVE TRADE

Political effects

1. The political effects were worse than the economic effects.
2. The demand for slaves far exceeded the supply.
3. African kings and merchants would not supply their own people as slaves.
4. They had to obtain captives by warfare or violence.
5. Without captives, they could not hope for European trade.
6. Wars and raids multiplied.
7. Pressure increased for firearms and ammunition which could be only bought from Europe.
8. The need for captives led to the need for firearms.
9. The need for firearms led to the need for still more captives and still more firearms, i.e. vicious circle.

Significance

1. The degradation of slavery went far beyond the slaving ships and plantations.
2. It created contempt for African humanity.
3. Fresh ideas and attitudes of racial superiority took root.
4. Slave trade was invaluable to Western Europe and the Americas.
5. It was disastrous for West Africa and the entire continent of Africa.

Conclusions

1. European and African rulers and merchants were involved in a trade that was morally degrading for both.
2. Europe—the slave trade was economically beneficial.
3. Africa—the slave trade was economically destructive and politically disastrous.
4. Slave trade—grim effects causing previously unknown violence and deepening despair among the peoples of Africa.

Additional Background Information for Teachers

Slavery and the Social Systems of Africa

1. African systems were based on economies of subsistence.
2. These economies were not significantly changed by trade.
3. They had no regular type of wage labour.
4. Men and women were organized in age sets for traditionally accepted forms of labour.
5. Free labour services were imposed on certain groups.
6. These workers in African societies were not considered slaves but integral members of their communities.
7. They lived with their masters, could work free of obligations, and marry into the master's family.
8. The sale of Africans to European sea merchants did not deviate from practices of exchanging servile persons within Africa or within Europe.
9. The initial difference—slaves were sold for transport overseas to North America.
10. The number of slaves going to Europe was small.

Note: Refer to Beers, pp. 513-514.

Discussion

Through discussion, students should understand:

1. The Industrial Revolution resulted in economic and technological development for some of the peoples of the United States and Europe. The Industrial Revolution also affected the peoples of Africa.
2. According to the historian Walter Rodney, the Industrial Revolution disrupted the economic and technological development of the peoples of Africa.
3. In his book titled: *How Europe Underdeveloped Africa*, Walter Rodney claims that the slave trade supported the Industrial Revolution. African labor was exported from Africa leaving the continent stripped

of her strongest workers. These workers produced cotton which developed the textile industries of Europe and America.

4. Therefore, according to Rodney, these African workers developed Europe and the Americas and did not develop Africa. From Rodney's perspective, the slave trade in relationship to the Industrial Revolution economically "developed" Europe and the Americas as it economically "underdeveloped" Africa.

5. The principle of equity allows the individual in a society to satisfy his or her basic needs without prejudice to gender, race, or heritage. In order for sustainable development to be achieved, each citizen must have an equitable share in the economic development and political activities of the society.

Possible Discussion Questions

1. To what extent do you agree or disagree with the premise that the Industrial Revolution disrupted the economic and technological development of the peoples of Africa? Support your position with evidence.

2. What impact did the warfare related to the slave trade have on the peoples of Africa?

3. Compare and contrast the domestic slavery systems and inequities of Africa and Europe with the plantation slavery system and inequities of the Americas.

4. Did the Industrial Revolution contribute to the dilemma of inequity in the contemporary world? Explain.

5. To what extent are Europeans and Americans responsible for the existing poverty in present-day sub-Saharan Africa?

6. What lessons about equity does the impact of the Industrial Revolution on Africa teach us for the future? Be as specific as you can.

7. Can the struggle to end slavery in the past be compared to the struggle to end inequity today? What lessons might one learn from the former to achieve the latter?

8. Would economic development be more sustainable over centuries if it redressed past and present inequities?

Note: See the *Effects of the slave trade on Africa* notes on Handout 8.

Additional Activities

1. The introductory set using the cotton balls, thread, and cloth, could be expanded into a full class activity. Students could research the production of cotton by exploring some of the following lines of inquiry:
    A. Has cotton been grown in other parts of the world? Where and when?
    B. How much cotton was produced at specific times in specific places? What price did the cotton bring? Where was the cotton sold?
    C. How did the raw cotton actually get processed into thread and cloth?
    D. How did the cotton and finished products get transported?
    E. Who grew the cotton? Were slaves employed in these locales? Why or why not?
    F. What values and beliefs were the basis for the acceptance of slavery? Where did slavery exist?
    G. How have values and beliefs concerning slavery changed over time? Why?
    H. Compare current debates over commodities and manufactured goods with the situation of the 1700's and 1800's in the United States of America.
2. Students could also experiment with scenario writing or socio-drama. Imaginative questions such as the following could be employed:
    A. What would the world look like today if the historical process had been reversed and Europeans and Americans had been taken to Africa as slaves?
    B. What are some of the products that would have been developed by the Industrial Revolution in Africa?
    C. What would have been the indicators of wealth and power?
    D. Would there be any new names on the map today?
3. A small group of students might be interested in developing a "board game" using a map or the actual physical classroom.
    A. Students could be divided into continents or countries.

B. Students could be given artifacts to represent cotton, manufactured goods, money.

C. Then, students could be moved by a "trader." Africans could be moved into American slavery. In this way, students would get an experiential feel for the process.

D. Students could be asked to generate hypotheses as to the effects of x, y, or z including factors such as the decrease of population in Africa, and the introduction of firearms.

E. Students could then be assigned readings to test their hypotheses.

Note: This is just an idea. The game plan must be fleshed out by the teacher.

4. Possible Debate Topics:

A. People and nations that accumulate wealth and power on the basis of such an immoral practice as slavery should not be allowed to keep the wealth.

B. Because the West underdeveloped Africa by removing millions of Africa's most able workers in the slave trade, by destroying native cultures, and by imposing European culture and institutions during the colonial period, Europe and North America should give poor African countries, not aid, but reparations to make up for past injustices.

C. A globally just economic or political system can be built on an inequitable foundation.

D. All power flows either "from the barrel of a gun" or from "vaults of gold."

E. An international statute of limitations regarding past inequities should be adopted by the nations of the world.

Evaluation

This simple written assignment deals with the concepts of equity and sustainable development. Students can share their definitions of sustainable development with the rest of the class.

1. In one paragraph, define sustainable development. Explain the concept of equity in relationship to sustainable development.

2. In a second paragraph, analyze the Industrial Revolution in relationship to the concept of equity in sustainable development.

Sources

Beers, Burton F. World History: Patterns of Civilization. Englewood Cliffs, New Jersey: Prentice Hall, 1988.

Davidson, Basil. Africa in History: Themes and Outlines. New York: Macmillan Publishing Company, 1968.

Rodney, Walter. How Europe Underdeveloped Africa. Washington DC: Howard University Press, 1982.

Worldviews of Development

PURPOSE

Students will view and analyze development issues from multiple perspectives. These five perspectives are variations on two major worldviews, namely the capitalist paradigm and the radical political-economy paradigm.

OBJECTIVES

1. Students will be able to describe five worldviews in the field of development, namely free market, Malthusian, liberal interventionism, dependency analysis, and Marxism.
2. Students will compare and contrast five worldviews as they relate to the hunger problem.
3. Students will analyze worldviews contained in educational materials and in reports from development agencies.

TIME REQUIRED

One to two class periods per activity

MATERIALS NEEDED

Handout 11, *Competing Paradigms of Development*
Handout 12, *Key Terms*
Handout 13, *Worldview Chart*

Adapted by Marie Varley, Church World Service/CROP, Newark, NJ, from: Weaver, James H., Steven H. Arnold, Paula Cruz, Kenneth Kasterer, *Competing Paradigms of Development*, Social Education, April, May 1989.

PROCEDURES

Activity 1

1. Divide class into five groups. Have each group read one of the following worldviews from Handout 11:
   - A. Capitalist—Free Market (Adam Smith)
   - B. Capitalist—Malthusian (Lifeboats-population)
   - C. Capitalist—Government Intervention (Keynes)
   - D. Dependency View—Exchange of goods
   - E. Marxist View—Production of goods
2. Present World Hunger as a problem to be solved.
3. Have total class brainstorm possible solutions to the problem of World Hunger.
4. Have each group identify those solutions that most closely fit the worldview they have studied. From the standpoint of each group's worldview, have the groups explain to the rest of the class the assumptions on which the proposed solution is based.

Activity 2

1. Assign the entire Handout 11, *Competing Paradigms of Development,* to students to read. Before the reading assignment, have students look up the definitions of key terms from Handout 12.
2. Have students fill out a retrieval chart, summarizing the basic assumptions of the five worldviews presented in the reading. Give each student five copies of Handout 13, one copy for each worldview.
3. Have students write (A) next to elements of the different worldviews with which they agree and (D) next to elements with which they disagree.

4. In areas in which the students do not know if they agree or disagree, have them list information that they feel they need in order to be able to decide whether they agree or disagree with the statements.

5. Assign a section of the class textbook or major information source that deals with: the response to the Industrial Revolution, development, or "Third World" regions.

6. Ask students to identify, if they can, the authors' worldview by the way the author describes a problem and/or solutions.

7. Using the same problem, have students offer at least one other possible solution to the problem based on a different worldview.

Activity 3

1. At least four weeks ahead of time, the teacher needs to request annual reports or sample materials from major hunger and development agencies, for example, American Friends Service Committee, CARE, Catholic Relief Service, Church World Service/CROP, Food Research and Action Center, Oxfam America, Jewish World Service. See Chapter 8 for addresses and additional names.

2. Students will read Handout 11, *Competing Paradigms of Development,* and complete Handout 12 for each worldview.

3. Have students read development-related reports/articles from at least three different development organizations or agencies.

4. Ask: *How do the organizations describe and analyze the problem they are addressing? What are their proposed solutions? With which worldviews do the organizations seem to identify most closely?*

Teacher Background Materials

SUMMARY OF WORLDVIEWS

1. **Capitalist—Free Market Approach**

Worldview: Rational human nature pursues individual self-interest by minimizing pain and maximizing pleasure. The good society has highest possible rate of sustainable economic growth, efficiently produced to minimize labor and other resources, and guided by consumer sovereignty and political freedom.

Economic system needs to open itself to the maximum amount of technological innovation to increase productivity; open the economy to multinational corporations that are major sources of capital and know-how. The government needs to protect the key capitalist institution of private property, or in Smith's words, "to protect the rich against the poor, to protect those who have property against those who have none at all." Private contracts must be enforced to enable the market work unhindered by force and fraud. Governments need to provide for a system of money and credit to enable potential entrepreneurs to get together with those who have money. Governments also must facilitate trade with other nations, which allows a country to become more efficient by specializing in what it does best. Government focuses on production and growth rather than distribution and equity.

Economic Problem: Scarcity. In both rich and poor countries, the economic problem has been the result of government interference with the free market. Third World governments have intervened in their economies under the banner of independence or equity, resulting in the creation of a parasitical state with a bloated bureaucracy that stifles creative private entrepreneurship and is unable to encourage efficiency and growth.

Solution: Focus on the production and growth, and cut back extensively on the governmental role ensuring that countries "get their prices right" to ensure the free market becomes an effective guide to efficient production: cutting wage rates (weaken labor unions or eliminate minimum wages); raising food prices (to encourage agricultural production); raising interest rates (to give a more reasonable value to the cost of capital); devaluing the exchange rate (to make

imports more expensive and exports cheaper). Result: private entrepreneurs following their own self-interest and guided by Adam Smith's "invisible hand" of competition will bring about development.

2. **Capitalist—Malthusian View**

   Worldview: The good life, in material terms, is not and cannot be attainable for everyone. Population exceeds the world's carrying capacity.

   Economic Problem: Scarcity, but much more pessimistic than Smith about the ability of industrial capitalism to find a solution. Modern-day Malthusians find the world is trapped in a losing race between resources (land) that remains in fixed supply and people who multiply.

   Solution: Challenge is to make hard and cruel choices essential to preserve the world as a whole. Garret Hardin, for example, sees the world as a series of lifeboats, supporting a limited number of passengers, afloat in a sea of struggling swimmers. Global survival depends on several harsh but necessary policies: (immigration policy) preventing people from entering the lifeboats, deciding through "triage" calculation which people and countries are written off as basket cases and are beyond help; finding ways to reduce the number of swimmers (population control), and forcing the swimmers to reduce consumption to keep from fouling the sea (environment).

3. **Capitalist—Government Intervention**

   Worldview: Optimism about the productive capacity of market capitalism, but it needs to overcome four built-in problems for capitalism to achieve its fullest potential.

   Economic Problem:

   1. The free-market system has been prone to instability, leading to periodic economic crisis like the Great Depression.
   2. It has been exploitative, leading to child labor, long hours and low wages.
   3. The market has not been able to price accurately all the "externalities," for example, environmental pollution.
   4. The system often tends toward monopoly, which destroys the checks and balances of free-market competition upon which capitalism depends.

Solution: Enlightened government regulation can solve these problems in order to take advantage of capitalism's productive potential without its negative side effects, e.g., John Maynard Keynes. Capitalism can be regulated for public benefit by a neutral, technocratic government. "Infant industries" need protection from free trade. On the internation level, the Bretton Woods system created the International Money Fund, the World Bank, and the General Agreement on Tariffs and Trade.

4. **Political Economy—Dependency View**

Worldview: People are social beings and act in groups to meet their needs, rather than primarily as individuals. Therefore a revolutionary change in society can lead to more socially responsible people. Work isn't pain, but self expression.

The dependency view focuses on the way goods are exchanged. "Third World" underdevelopment is a direct result of the pattern of First World development. Imperialism has worked to the advantage of the rich nations and to the disadvantage of the poor, systematically underdeveloping the Third World to make it serve the interests and needs of rich nations, rather than its own.

Problem: Power and the essential conflict between rich and poor. The developed world maintains the advantage since it exercises a monopoly as supplier or seller of technology and manufactured goods. It also maintains a monopsony as buyer of raw materials and manufactured exports from the Third World. "Buy cheap and sell dear" can therefore be followed only by the rich nations, to the severe disadvantage of the "Third World." As a consequence of this relationship, the economic system within the poor country mimics the world system, with a very rich minority extracting wealth from a very poor majority.

Solution: Development is essentially a political struggle. Some argue that the key is for the poor nations to "de-link" from the world system, turning inward to their own markets or focusing on "south-south" trade. Others focus more on liberating the poor through democratic means if possible, but more likely through confrontation or even revolution to allow them to break the chains of economic exploitation and reclaim their own culture. The objective is the same, freeing the exploited to enable them to become more developed not only in an economic sense, but also to become more fully human.

5. Political Economy—Marxist View

Worldview: The Marxist view tends to focus on the way goods are produced. They tend to look inward to explain a nation's level of development in terms of its own particular relations of production. E.g., England, in contrast to Spain and Portugal, became developed because it was a capitalist nation with capitalist relations of production, not because it exploited its colonies.

Problem: Power. The real barriers to development in underdeveloped countries are the noncapitalist forces of production and the relations of production that exist there. Feudal agricultural workers have rights to land so that they can produce their own subsistence, so they resist being drawn into money economy as wage labor, and therefore provide only a very limited market for capitalist production in the country. In this stagnant system it becomes impossible to develop as there is no way to increase the productivity of labor.

Solution: Take state power to break down feudal structures and create socialist development. Build organizations among workers and peasants. These organizations, led by a national political party, will be used as revolutionary resources when the objective conditions make a successful revolution feasible. After the revolution, the "commanding heights" of the economy are held in common and administered by the government. This includes all the largest and most strategic financial, industrial, and commercial enterprises, which are expected to be the main engines of growth and receive the lion's share of new investment capital. A rationed-based system of highly subsidized basic commodities meets everyone's basic needs, while a highly taxed system of luxury goods allocates these to consumers willing to pay these prices.

All trade with the outside world must be channeled through government agencies that adjust the world prices through subsidies or surcharge.

Using the Paradigms in the Classroom

The purpose of presenting these paradigms is to help students to become critical consumers of messages they read, see, or hear. This can be done in a number of formats. Students could be given the article to read. A more active approach would present the contents of the article orally, arguing forcefully for each view in turn (this could be done by the teacher, or, following a modified debate format, by several teachers or students, each taking one view). Once this has been presented, there are a variety of possible follow-up exercises. Two possible exercises follow.

1. Divide the students into groups of five or six, and have each group brainstorm what it would do about one specific development issue, such as world debt or world hunger. Once they have listed all their proposals, they should be asked to try to categorize each proposal in terms of the paradigm it most closely fits, noting the assumptions on which it is based. Ideally, each group should have an experienced individual (student or teacher) who can help this process along and report back to the class the results of the group. If several teachers present the paradigms, they could also serve as group facilitators for this exercise.

2. The second exercise, requiring somewhat less expertise, is called "spotting the paradigm." The class is divided into groups of five or six students, and each group is given a set of three or four short (1- or 2-page) articles (e.g., editorials, short essays, parts of larger articles or books), each of which represents a specific paradigm. Students are asked to read articles and come to a group consensus for each as to the paradigm presented, showing how the paradigm helps influence the conclusions reached in the reading. A variation that can be used with small groups or the class as a whole is to use advertisements, slogans, or short clips from television shows to see how quickly students can spot the underlying paradigm.

These exercises have been tried with a variety of audiences, including college freshmen, high school teachers, church groups, and retired persons. In each case, participants have found it an enjoyable and empowering experience, improving their critical skills and giving them tools to evaluate what they read, see, and hear.

This article is part of a larger development education program that is presently being developed by the Development Studies Program, under a Biden-Pell grant administered by the Agency for International Development. Under this grant, representatives of school districts and private voluntary organizations will be able to participate in one-day or five-day workshops to learn more about international development issues. For information about the program or to receive a more detailed paper from which this article is drawn, write to the Development Studies Program, 1815 N. Ft. Myer Drive, Room 400, Arlington, Virginia 22209.

Using the Paradigms in the Classroom accompanies the article, *Competing Paradigms of Development,* by James H. Weaver, Steven H. Arnold, Paula Cruz, and Kenneth Kusterer.

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COMPETING PARADIGMS OF DEVELOPMENT

by James H. Weaver, Steven H. Arnold, Paula Cruz, and Kenneth Kusterer

Efforts to promote Third World development face a baffling array of issues, leading to a broad and sometimes confusing range of responses. Most economic theories that underlie and guide these choices, however, may be fitted into one of two paradigms or comprehensive worldviews: the capitalist approach (which includes three variations: free market, Malthusian, and liberal interventionism) and the radical political-economy approach (which includes two variations: the dependency analysis and Marxism).

Attempting to describe these various visions of change in a brief article runs the risk of excessive stereotyping and overgeneralization. Highlighting at least some of their differences, however, should make it possible to identify the philosophical origins of various development policies.

The Capitalist Paradigm

The capitalist paradigm in one or another of its forms tends to undergird most conventional policy-making approaches used in the United States, and its assumptions are familiar to anyone who has studied economics. In this approach, each human being is assumed to act rationally in pursuing his or her individual self-interest, guided by the hedonistic principle of maximizing pleasure (achieved largely through consumption of goods) and minimizing pain (including minimizing the amount of work required to produce these goods).

The good society, therefore, is one that has the highest possible rate of sustainable economic growth (measured by the Gross National Product), efficiently produced to minimize the amount of labor and other resources required, and guided by consumer sovereignty and political freedom to ensure that individual preferences determine what is to be produced.

For capitalism, the key economic problem is scarcity. Although human wants are assumed to be insatiable, resources such as land, minerals, and labor supply are limited. No system can fully resolve this contradiction, but proponents of capitalism argue that it is the most efficient system for effectively allocating land, labor, capital, technology, and entrepreneurship. Most important, it is assumed that prices generated by the free market for all these factors of production give the best indication of their relative costs and therefore are the best guide for efficient production.

If the above leads to development, underdevelopment is its opposite. Typically, underdeveloped societies are assumed to lack key resources, such as capital, and are often tied into traditional institutions and patterns of behavior that inhibit the development of such key capitalist elements as the free market

and the entrepreneurs essential to the efficient combination of the factors of production.

All positions within the capitalist paradigm adopt this general vision, but there is profound disagreement on many of the specifics, including differences regarding the nature of the problem and the proposed solutions.

The Free-Market Approach

The free-market model originally proposed by Adam Smith has seen an important resurgence in popularity in the 1980s. This version of the capitalist paradigm argues that the economic problems in both rich and poor countries have largely been the result of government interference with the free market. Third World governments in particular have intervened in their economies under the banner of independence or equity, but the result has often been the creation of a parasitical state with a bloated bureaucracy that stifles creative private entrepreneurship and is unable to make the hard choices necessary to encourage efficiency and long-term growth.

The antidote is to focus explicitly on production and growth, cutting back extensively on the governmental role and ensuring that countries "get their prices right" to ensure that the free market becomes an effective guide to efficient production. Often, the prescription includes cutting wage rates (by weakening labor unions or eliminating minimum wages), raising food prices (to encourage agricultural production), raising interest rates (to give a more reasonable value to the cost of capital), and devaluing the exchange rate (to make imports more expensive and exports cheaper). In such a situation, private entrepreneurs, following their own self-interest and guided by Adam Smith's "invisible hand" of competition, will bring about development.

Related to this, the system needs to open itself to the maximum amount of technological innovation, which is one of the most important ways of increasing productivity. Not only does this mean freeing up domestic entrepreneurs, but it also means opening the economy to other important sources of innovation, such as multinational corporations that are also major sources of capital, as well as know-how.

Although the government is no longer the main actor in the economy, it still has an important facilitating role in setting up the appropriate climate for this free-market system. Specifically, it needs to protect the key capitalist institution of private property, or, in Smith's words, "to protect the rich against the poor, to protect those who have property against those who have none at all." Private contracts must also be enforced, to enable the market to work unhindered by force and fraud. Governments also need to provide for a system of money and credit, to enable potential entrepreneurs to get together with those who have money. Finally, the government also must facilitate trade with other nations, which allows a country to become more efficient by specializing in what it does best.

To carry out such a program, a government may feel required to be courageous, ruthless, and perhaps undemocratic to ride roughshod over the special interests currently benefiting from the inefficiencies, protection, and subsidies of the existing system. For the short term, this may mean that the interests of the poorer sectors are ignored as the government focuses on production and growth rather than distribution and equity. This transition may be painful, but this is seen as the only way to get the economy back on the track of long-term, efficient growth.

Malthusian Approach

Like Smith, Malthus accepted that the fundamental economic problem was scarcity, but he was much more pessimistic about the ability of industrial capitalism to find a solution. For him and modern-day Malthusians, the world is trapped in a losing race between resources (land) that remain in relatively fixed supply, and people, who multiply. The inevitable result is that population eventually exceeds the world's carrying capacity, leading, in the absence of any other form of regulation, to such "natural" checks as famines, disease, and war. The world has recently experienced the most rapid population growth in its history, with most of it having taken place in the Third World. For Africa, for example, current rates mean that the GNP will have to more than double in less than a generation, just to enable these nations to remain where they are, let alone improve their lot.

What, then, can be done to improve the prospects for world development? The Malthusian view holds little promise. The "rational self-interest" of the capitalist paradigm is viewed in a very different light, leading individuals to pursue short-term antisocial strategies that, if left unregulated, may be catastrophic for future generations. Most important, the prospects for increasing resources dramatically through a continual "technological fix" is seen to be a false hope, creating as many problems as it solves. Furthermore, attempting to follow the industrial path of the rich nations will be catastrophic for the world's ecosystem, polluting air, water, and soils to intolerable levels, and augmenting the currently destructive trend toward global warming.

In short, the good life, in material terms, is not and cannot be attainable for everyone, and the challenge now is to make the hard and cruel choices essential to preserve the world as a whole, if not all of its inhabitants. Garret Hardin, for example, sees the world as a series of lifeboats, supporting a limited number of passengers, afloat in a sea of struggling swimmers. Following this analogy, global survival depends on several harsh but necessary policies: preventing swimmers from entering (and swamping) the lifeboats, which is the basis for immigration policy; deciding through a "triage" calculation which people and countries written off as basket cases are beyond help; finding ways to reduce the number of swimmers (population control); and forcing the swimmers (and possibly lifeboat passengers) to reduce consumption to keep from fouling the sea

(i.e., the environment) so badly that boating of any kind becomes impossible. Such policies may seem immoral to some, but, given Malthusian assumptions, they are essential for global survival.

Government Intervention

A third variant of the capitalist paradigm is much closer to the free-market approach in its optimism about the productive potential of market capitalism, but suggests that the free-market system, left on its own, has historically led to four sets of problems that need to be addressed to allow capitalism to reach its full potential.

First, it has been prone to instability, leading to periodic economic crises, the most spectacular being the Great Depression of the 1930s.

Secondly, it has been exploitative, often leading to child labor, long hours, and low wages.

Third, the market has not been able to price accurately all the "externalities"—for example, environmental pollution—which have led private investors to ignore some investments that would be socially productive, and to engage in others that bring many negative costs.

Finally, the system often tends toward monopoly, which destroys the checks and balances of free-market competition upon which capitalism depends.

This view sees the solution as one of using enlightened government regulation to iron out these problems in order to take advantage of capitalism's productive potential without its negative side effects, a view most often associated with John Maynard Keynes. The basic assumption of this position is that capitalism can be regulated for public benefit by a neutral, technocratic government.

Since World War II, virtually all developed nations have committed themselves to government regulation of the economy to promote employment, growth, and purchasing power. The same ideas were also central to the new international economic system created at Bretton Woods in 1944, which created three organizations to help regulate the world economy through technocratic intervention: the International Monetary Fund, the World Bank, and the General Agreement on Tariffs and Trade.

In the Third World, this technocratic interventionist system was seen as crucial, as markets were assumed to be even more imperfect and in need of regulation. As a result, government planning was seen as very important to ensure that the market behaved responsibly, and to make up for places in which the market did not operate. Most nations established planning departments to establish a national investment strategy, undertook major projects in road building, communications, and other necessary infrastructure that the private sector would not provide, and began major programs in education and training that were assumed necessary to create an effective labor force. In addition, parastatals (publicly owned corporations) were often established in key sectors (power, agriculture, communications) that were seen as in the national interest.

This approach was also skeptical of relying on so-called free trade to promote growth. Instead, industrialization was stimulated through the use of tariffs and measures to protect "infant industries" until they could mature. Following this approach, developing nations were counseled to manipulate taxes, prices, interest rates, and foreign exchange rates to stimulate investment in these industries, and they were encouraged to form customs unions, common markets, and regional free-trade areas to expand their markets for these industries.

This interventionist vision dominated the postwar era, but by 1980 there was widespread disillusionment with Keynesian demand management techniques in rich nations, leading to the election of free-market politicians such as Margaret Thatcher and Ronald Reagan. Both leaders had convinced their electorates that the welfare-state approach had been a failure, and that a return to more free-market approaches was the solution. This has led to a dismantling of some of the institutions of the previous era under the call of privatization and a change in the focus of others, such as the Bretton Woods organizations established to regulate the international economy.

The Radical or Political Economy Paradigm

The radical or political economy paradigm is much less familiar to most Americans, and its basic assumptions differ in important respects from the capitalist view. While both paradigms hold that people are rational, the radical paradigm stresses that people are social beings and that they act together in groups to meet their needs rather than operating primarily as individuals.

This paradigm assumes that much of what capitalists see as fixed human nature is simply the product of an existing social system; a revolutionary change in society, therefore, can eventually transform the "human nature" of people in that society to become, for example, more responsible socially.

Their vision of the good life is a society in which all work is humanely organized and nonexploitative and all material goods are sufficient and equitable distributed. Unlike the capitalist view in which work is equivalent to pain, work is seen as the way human beings define, develop, and express themselves and as an essential part of one's being.

The good society, therefore, has several characteristics. First, it must guarantee consumer sovereignty, ensuring that all have relatively equal access to material benefits. Second, it must ensure that people are able to have meaningful and fulfilling work. Third, it includes the concept of citizen sovereignty, which enables people to determine the type of community in which they live. Finally, it must ensure equality.

What equality means varies in different approaches, but the concept itself is basic to this paradigm. In short, the goal is to mobilize all human potential in society to work together to meet everyone's human needs. This creates, at the same time, enhanced human growth, enhanced social solidarity, and a more equitable distribution of goods and services.

While the key to the capitalist paradigm is the concept of scarcity, the key to the radical approach is the concept of power. Unlike the capitalists, the radical approach suggests that there is an inherent conflict of interest between the rich and the poor, and that the key to development lies in a successful challenge to those in charge of the capitalist system. The nature and timing of this challenge vary, but the concept that development is essentially a political struggle is central to this view.

This radical perspective is less unified in its view of Third World development and the relationships between rich and poor nations. Although there is general agreement that these relationships have been dominated by imperialism, they disagree fundamentally on the implications of this relationship. This disagreement is clearly illustrated in examining two of the best-known variations of the radical paradigm, the dependency approach and the Marxist view.

Dependency Analysis

The hypothesis of the dependency view is that Third World underdevelopment is a direct result of the pattern of First World development. Imperialism has worked to the advantage of the rich nations and to the disadvantage of the poor, systematically underdeveloping the Third World to make it serve the interests and needs of rich nations rather than its own. Third World nations are underdeveloped because rich nations thrive in a market system based on exploitation of resources, both human and natural. This system requires developing nations to be dependent on the developed countries for markets for their raw materials and small manufactures and then requires further dependency on developed countries to supply advanced technology and luxury goods.

This relationship is often referred to in terms of the "core" and the "periphery," with the industrialized nations taking the centralized core position and the developing nations, the outsiders, assigned to the periphery.

Although some interdependence exists in this model, the developed world maintains the advantage because it exercises a monopoly as supplier or seller of technology and manufactured goods and because it maintains a monopsony as buyer of raw materials and manufactured exports from the Third World. The classic economic market axiom, "Buy cheap and sell dear," can therefore be followed only by the rich nations, to the severe disadvantage of the Third World.

Largely as a consequence of this relationship, the economic system within the poor country mimics the world system, with a very rich minority (supported by the world system) extracting wealth from a very poor majority. The roots of this inequality may lie in colonial history or in the practices of multinational corporations, but the end result is that the social surplus available for future investment is in the hands of the elites who either send it abroad or spend it on private consumption of luxury goods. As a result, the country as a whole remains poor, since little productive investment is undertaken.

Given this assessment of the problem, the focus tends to be more on freeing a group or nation from underdevelopment rather than discussing development. It assumes implicitly that development can occur once the exploitative core-periphery pattern of imperialism is broken.

Achieving such a goal, however desirable, is not easy, and dependency analysts suggest a variety of possible strategies. Some argue that the key is for the poor nations to "de-link" from the world system, turning inward to their own markets or focusing on "south-south" trade. Others focus more on liberating the poor, through democratic means if possible, but more likely through confrontation or even revolution, to allow them to break the chains of economic exploitation and reclaim their own culture. Regardless of the specific strategy, the objective is the same: freeing the exploited to enable them to become more developed not only in an economic sense, but also to become more fully human. As Franz Fanon put it, "Let us decide not to imitate Europe, let us combine our muscles and our brains in a new direction. Let us try to create the whole man, whom Europe has been incapable of bringing to triumphant birth."

The wide variety of Marxist approaches makes it difficult to describe one specific vision. In general, however, its explanation of underdevelopment is very different from the dependency view. While dependency analysts focus on the way goods are exchanged, suggesting that underdevelopment is caused by rich nations or elites taking advantage of the poor, Marxists tend to focus on the way goods are produced. For most Marxists, capitalism is seen as the key to economic development because it is an extremely dynamic mode of production, breaking down the servile mode of production known as feudalism which inhibits progressive change and economic growth. Unlike the dependency theorists, who tend to explain underdevelopment in poor nations in terms of the exploitation by outside forces, Marxists tend to look inward to explain a nation's level of development in terms of its own particular relations of production. Thus England became developed because it was a capitalist nation with capitalist relations of production, not because it exploited its colonies. Spain and Portugal, on the other hand, were not able to develop despite the wealth they gained through the plunder of their colonies, as their feudal modes of production encouraged this new wealth to strengthen these feudal structures rather than destroy them.

In this view, the real barriers to development in underdeveloped countries today are the largely noncapitalist forces of production and relations of production that exist there. Feudal agricultural workers have rights to land so that they can produce their own subsistence, so they resist being drawn into the money economy as wage labor, and therefore provide only a very limited market for capitalist production in the country. In this relatively stagnant system, it becomes impossible to develop as there is no way to increase the productivity of labor. If countries wish to develop by introducing capitalism, therefore, they will have to pay the same social costs that all developed capitalist countries have

previously paid—a violent, wrenching social transformation of their agricultural sector that forces the peasants off the land and into wage labor.

How does one break down these feudal structures and set out upon the path toward socialist development? The pivotal step, before which little is possible and after which anything is possible, is taking state power. Marxists try to build organizations (unions, parties, national or ethnic movements) among workers and peasants. These organizations, usually led by a national political party, will be used as revolutionary resources when the objective conditions (economic crisis, political conflict, governmental loss of legitimacy) make a successful revolution feasible.

After the revolution, the "commanding heights" of the economy are held in common and administered by the government. This includes all the largest and most strategic financial, industrial, and commercial enterprises, which are expected to be the main engines of growth and receive the lion's share of new investment capital. Smaller production units, especially in agriculture but also in other sectors, are held as cooperatives or collectives by the people who work there, with the state influencing their production decisions either directly (through quotas and regulations) or indirectly (through a system of tax or credit preferences). Small-scale or nonstrategic private enterprises are often encouraged, although with varying degrees of success.

Marxist economies differ in the extent of space left open for markets and market prices to function. Generally, a ration-based system of highly subsidized basic commodities meets everyone's basic human needs, while a highly taxed system of luxury goods allocates these to consumers willing to pay these prices. All prices are insulated from world-market fluctuations, and, because of the considerations mentioned above, prices bear little resemblance to those on the capitalist world market. Therefore, all trade with the outside world must be channeled through government agencies that adjust the world prices through subsidies or surcharges.

There is also a tension between economic strategies that emphasize central planning and control, and strategies that emphasize mobilization of local human resources. Centralists believe that it is more rational and efficient to allocate investments through central bureaus, following comprehensive plans drawn up with the help of the best experts available. Mobilizers, on the other hand, believe that the primary function of the party is to motivate local cadres to pull together the resources to solve their own problems, and government allocates resources primarily by responding to local initiatives. The current trend appears to be away from centralism and toward a kind of market-oriented decentralism that permits the promise of wealth as an incentive for local resource mobilization.

Implications

What is the value of knowing these competing paradigms and visions? One useful lesson is to see that there is not necessarily one right answer. Each has basic and untested assumptions, and proposals that have worked in some countries and time periods have failed in others. China and Taiwan, for example, have both experienced phenomenal growth while following fundamentally different strategies.

Second, the field of development theory is itself in disarray, with many fundamental disputes and debates, and no consensus on what developing countries should do. Advocates of free-market solutions, for example, appear convinced that they have the solution, yet countries like Korea continue to do extremely well with heavily state-controlled economies. Although it is impossible to include all these debates in a short article, describing and analyzing some of the major arguments help provide a healthy skepticism toward any person or institution claiming to have a universal solution.

This disarray helps illustrate the commonsense truth that the real world is extremely complex and that theories are at best imperfect approximations of part of this reality. The advantage of having several points of view is to be able to examine a problem from many different angles, leading to improved understanding of it. It is quite possible that all these views have part of the answer, with the utility of a particular view depending on the specific situation. Typically, a real-world solution will demand a combination of insights, so that the ability to include several different views should enhance one's comprehension.

In sum, the struggle for development is an exciting and controversial adventure, and we hope this article helps convey some of the intellectual ferment it generates, as well as increased interest in entering into the policy arena to place development issues higher than they have been on the world's agenda.

James Weaver, Steven Arnold, Paula Cruz, and Kenneth Kusterer are members of the Development Studies Program, a joint project of American University and the Institute for International Research, providing training to mid-level professionals in the U. S. Agency for International Development.

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KEY TERMS

capitalism
citizen sovereignty
cooperatives
development
ecosystem
elites
entrepreneurs
environmental pollution
feudal structures
foreign exchange rates
free market
Great Depression
Gross National Product
imperialism
infant industries
interventionist
labor unions
monopoly
monopsony
paradigm
resources
scarcity
socialist development
subsidized
sustainable development
tariffs
Third World—developing nations
triage
underdeveloped

WORLDVIEW CHART

Name of Worldview _____

Brief Description of Worldview

Human nature:

Economic system:

The Economic Problem

The Solution

The Quality of Life and Sustainable Development

PURPOSE

The student will study data on the quality of life of people in a country. This study should help the student understand the issue of equity and how it relates to sustainable development.

OBJECTIVES

Students will be able to:

1. Define key terms and concepts from the field of development, including the following: Physical Quality of Life Index, per capita Gross National Product (GNP), life expectancy, literacy, infant mortality, and equity.
2. Understand and use the vocabulary of sustainable development, applying the concept of equity to the interpretation of statistical data.
3. Analyze some of the social and economic issues in development.
4. Formulate and investigate development-related questions regarding quality of life.

TIME REQUIRED

Two to four class periods, depending on the amount of information given to the students and the format used to teach the lesson.

MATERIALS NEEDED

Each student should receive a copy of Handout 14.

Developed by Thomas Crop, Bridgewater-Raritan School District, NJ.

PROCEDURES

1. After distributing Handout 14, the teacher should spend time defining and explaining terms on the chart. Allow time for students to ask questions about the terms.

2. Divide the class into small groups of three or four students. Before the groups begin to work, explain to the class that it may be very hard to get all of the countries in the exact location. It may be good enough to place the country in the proper quarter of the chart. Give the class 15-20 minutes to write the names of countries on the chart. Be certain to observe the discussions that take place in the small groups as the students analyze the data looking for clues.

3. Have each group put their final list on the chalkboard. Allow each group time to explain anything that influenced their decision making.

4. Place the correct list from Handout 15 on the chalkboard. Have the students compare this list with the lists created by each group.

5. Conduct a discussion around the following topics:

   A. What countries have a high percentage of workers in agriculture?

   B. Do these countries rank high in the number of calories or protein the people receive? If not, what might these discrepancies imply?

   C. Are male and female literacy rates the same in most countries? Why or why not?

   D. Is there a relationship between calories and life expectancy or infant mortality?

   E. Compare the Physical Quality of Life list to the Per Capita G.N.P. What conclusions can you draw?

   F. Does the location of any nation on the Physical Quality of Life list surprise you? Why?

   G. What reasons do you think there are for these differences among countries?

LESSON EVALUATION

Ask the students to draw conclusions from the data on the chart.

Examples:

- Is there a relationship between economic development and a high quality of life?
- Is a high quality of life essential for economic development?
- What problems do the countries on the bottom half of the list face?
- What problems do the countries on the top half of the list face?
- What equity issues emerge as you analyze these data?
- What suggestions would you offer to countries on the bottom half of the list? On the top half?

ALTERNATE LESSON FORMAT

Instead of giving the students the completed list, assign each student a country and have the students do library research to find the information. Each student could report their findings to the class. A computer data base could be created or the information could be placed on a blank form similar to the one used in this lesson. The discussion that would follow would be the same as in the original version of the lesson. You will need one or two days for library research depending upon how much help you want to provide in the research process. I have a personal preference for this format because the student begins to identify with the nation.

Teacher Background

The Physical Quality of Life is a composite measure of human well-being based on social indicators, viz., life expectancy, infant mortality rate, and literacy rate. The Physical Quality of Life Index (PQLI) was developed by the Overseas Development Council.

Sustainable Development requires that the Physical Quality of Life be high enough to guarantee a reasonable existence for the people. The Physical Quality of Life can be described subjectively through descriptions of living conditions or objectively through the analysis of statis-

tics. The three indices of the PQLI—life expectancy, infant mortality rate, and literacy rate—are each based on a scale of 1 to 100. The PQLI is an average of these three with 100 at the top and 1 at the bottom. Since this composite index, calculated by averaging the above three indices, is free from the distortions of monetary measurements, such as GNP, it may be a more accurate measure of the relative relationships of nations. It also avoids the problems of absolute standards, e.g., calorie intake, for which there may not be agreement. Because it is concerned with basic and universal human needs, the PQLI may be applied to all nations with equal validity.

There tends to be a correlation between the PQLI and GNP per capita, but there are significant divergences. The oil rich Arab states have high per capita GNPs but low PQLIs, while the island of Sri Lanka with a low per capita GNP has a very high PQLI. Australia, France and Iceland with a PQLI of 100 are ranked 1, 2, and 3. The United States is 15th with a 98, while Ethiopia with a PQLI of 25 is ranked 169.

PHYSICAL QUALITY OF LIFE

COUNTRY	P.Q.L. Index		PER CAP GNP (US $)		LIFE EXP. (years)		LITERACY MALE (%)		LITERACY FEMALE (%)		INFANT MORT. /1000		CALORIES #/day		PROTEIN grams/day		%WRKRS in Agricult.	
1	2	100	19	10740	28	76	22	99	21	99	161	8.0	15	3529	15	98.1	154	7.8
2	5	99	12	12850	4	78	9	100	9	100	171	5.2	54	2852	35	86.4	148	8.8
3	8	99	2	17840	6	77	15	100	15	100	168	5.9	34	3146	36	85.6	172	4.8
4	9	99	2	17840	1	78	16	100	16	100	167	6.8	18	3449	30	89.7	156	7.2
5	11	98			52	73	60	91	49	91	135	13.6	60	2796	56	70.4	119	18.3
6	15	98	3	17500	33	75	41	96	36	95	151	10.0	6	3641	4	104.7	179	3.1
7	38	91	66	1320	69	71	47	95	41	94	125	19.5	66	2759	44	73.9	126	15.1
8	43	91			93	69	5	100	5	100	118	25.0	21	3360	3	105.5	117	19.3
9	46	90	50	2330	78	70	43	96	26	72	102	35.3	26	3308	8	102.0	137	12.0
10	69	84	58	1850	84	69	64	78	52	70	88	50.0	51	2890	66	65.6	98	26.0
11	80	80	119	300	98	68	80	84	102	61	92	44.0	95	2426	77	62.8	39	62.5
12	87	77	59	1810	110	67	92	80	76	78	78	63.0	81	2578	73	63.4	87	29.8
13	91	74	87	790	130	61	86	58	68	57	72	69.0	91	2446	61	68.4	63	45.4
14	115	60	88	760	140	59	124	59	135	27	55	93.0	32	3175	51	71.3	69	41.2
15	125	55	127	270	147	56	133	55	138	26	49	104.0	145	2056	137	48.6	38	62.6
16	141	43	138	160	168	51	141	43	140	22	18	135.0	165	1837	153	43.0	45	58.8
17	148	41	116	320	162	52	146	37	157	7	42	112.0	110	2314	85	60.7	33	65.8
18	156	34		160	200	38	149	36	162	0.5	14	143.0	170	1762	88	60.1	10	83.3
19	160	29	136	170	193	45	135	14	132	3	21	132.0	109	2326	139	48.5	24	71.9
20	169	25	144	120	170	50	164	9	163	0.5	32	118.0	166	1793	74	63.3		80.0

Countries ranked by P.Q.L. Index

rank value

RANK is out of all reporting countries in each category.

COUNTRIES INCLUDED IN THE TABLE, listed alphabetically, not in the order they appear in the table.

Argentina	**China**	**Guinea-Bissau**	**Sudan**
Bangladesh	**Cuba**	**India**	**Sweden**
Brazil	**Egypt**	**Japan**	**Switzerland**
Chad	**Ethiopia**	**Mexico**	**U.S.S.R.**
Chile	**France**	**Nicaragua**	**United States**

PHYSICAL QUALITY OF LIFE Answer Sheet

1. France
2. Japan
3. Sweden
4. Switzerland
5. Cuba
6. United States
7. Chile
8. U.S.S.R.
9. Argentina
10. Mexico
11. China
12. Brazil
13. Nicaragua
14. Egypt
15. India
16. Bangladesh
17. Sudan
18. Chad
19. Guinea-Bissau
20. Ethiopia

Source: Kurian, Thomas, The New Book of World Rankings, 1991.
(Data on protein is from the 1984 edition.)

Decisions for a "Developing" Nation

PURPOSE

The purpose of this activity is to engage students in a decision-making situation that some countries face. In trying to make decisions about the best way to achieve sustainable development, countries have to deal with political, ideological and cultural factors which have a major impact on the decision-making process. Each student develops an understanding of how diverse and conflicting interests influence economic decision making in "developing" nations, especially when equity issues are involved.

OBJECTIVES

Students will be able to:

1. Analyze factors that influence the decision-making process.
2. Identify long-term and short-term consequences of the adoption of each project.
3. Assess each program to determine the extent to which each project helps the country achieve sustainable development.

TIME REQUIRED

Two class periods.

MATERIALS NEEDED

Handout 18, *Decisions for a "Developing" Nation* for each student.
Handout 19, *Roles*. Duplicate this handout, cut out the six roles and assign each student one role.

Prepared by Fred Cotterell, Paramus High School, Paramus, NJ.

PROCEDURES

1. Distribute to each student Handout 18 and one of the roles from Handout 19. There will be several students with the same role. Students are not to divulge their role or objectives.

2. Students are to follow the directions on Handout 18. Allow approximately 15 minutes for students to complete steps in directions A. and B.

3. The balance of the class time, and possibly some time the following class period, is to be used as a mock national legislative body in which step C. is to be completed.

4. The teacher, or a student selected by the mock national legislature, is to conduct the legislative debate and vote to determine which programs will be funded.

5. After the class has completed the task, the class is to analyze the difficulties they encountered in making decisions and assess the impact of the class' decision on achieving environmentally balanced development, equity and an improvement of the physical quality of life. Each student is to identify the role and position they took, and their approach to the situation.

EVALUATION

Teacher observation of student participation.
An assigned essay analyzing the difficulties the students encountered in making decisions and assessing the impact of the class' decision on achieving sustainable development.

DECISIONS FOR A "DEVELOPING" NATION

You are a member of the national legislative body of a "developing" country. Your government has allocated the equivalent of US$7,500,000 in the budget for projects to improve economic growth and economic equity. The national legislature is to decide which programs will be funded.

DIRECTIONS

A. Working independently, identify those projects you believe should be funded. Be sure to consider the special instructions you have received on your role card. Do not share those instructions with anyone.

B. Be prepared to defend your choices.

C. Proposals will be presented to the legislature (the entire class), and members of the legislature will determine by majority vote which programs will be funded.

$3,000,000	1.	Build primary schools to accommodate 200 students in 50 villages
$2,000,000	2.	Install systems to purify water in 200 villages
$2,500,000	3.	Build a highway for carrying lumber from a forest to a seaport from which it can be exported
$1,700,000	4.	Build, furnish, and equip four-room health centers in 50 villages
$1,000,000	5.	Make funds available to banks so they can make loans of $2,000 with very low interest charges to 500 farmers
$2,000,000	6.	Pay owners of the lumber business a subsidy to reduce the amount of lumber being cut to 2/3 of this year's amount
$1,000,000	7.	Finance the building of a small factory to make bicycles in the capital and develop a program to train factory workers
$500,000	8.	Train 100 high school graduates to teach in village schools and run literacy programs
$1,000,000	9.	Equip 20 minibuses to provide health care and family planning services in remote villages; train and pay salaries of workers on the buses
$500,000	10.	Make a survey of energy resources as a first step to reduce oil imports
$100,000	11.	Train 50 village fieldworkers and pay their salaries for a year; each of the fieldworkers will teach 100 farmers to use a new kind of seed and improved farming techniques
$2,500,000	12.	Build urban housing units for 250 families who are presently living in one-room shelters with no plumbing or electricity
$1,000,000	13.	Establish a family planning program throughout the nation, with regional information centers

ROLES

A. You are a member of an ethnic group that is opposed to a strong national government, especially since a rival ethnic group holds key executive positions.

B. You believe that immediate economic growth is more important than environmental concerns at this time in your nation's development, since it has one of the lowest standards of living in the area.

C. You are a member of the ruling party and of an ethnic group that has ruled the country for only a few years after decades of political instability.

D. You believe the immediate health and economic needs of the people must be met in order to assure political stability so that plans for long-term growth can be developed.

E. You believe that the future of your nation depends on its conserving its resource base and avoiding industrial pollution, while at the same time promoting economic growth.

F. You advocate socialism or modified communism to solve the nation's ills. You would like the present government to be replaced with a socialistic one.

BEST COPY AVAILABLE

Legong Dancer

I Wayan Sutya Wecana
Age 11
Indonesia

Chapter 5

An Analytical Framework for Sustainable Development

Introduction

How can students see connections between the usual topics and concepts covered in a world history or world cultures course and sustainable development? The matrix on page 5-3 provides one way to help students develop a framework in which to analyze a society or a period of history by raising questions about the relationship of geographic, social/cultural, political and economic concepts and the elements of sustainable development. Once students have internalized the methodology of an analytical framework, they are equipped to develop their own categories and think critically and creatively about other relationships as well.

You will see that the matrix on page 5-3 consists of a vertical list of topics fairly common to the social studies. The horizontal topics come from the three main elements of sustainable development, namely, the environment, development and equity.

Following the Analytical Framework you will find a list of sample questions for each box on the Framework. These questions are by no means definitive, but rather are suggestive. Their breadth attempts to reflect the richness of sustainable development as a mega-concept for helping to organize a course of study. We encourage you to work with your students to generate other questions to be explored that would relate more closely to your specific needs and interests.

The last section of this chapter contains a definition of each topic in the vertical column, a brief explanation of the relationship that we see between the topic and sustainable development, and an example of these relationships. These examples can serve as illustrations or as discussion starters with your students.

The Analytical Framework can be used in a variety of ways as students approach each unit of study. For example, you may want to use it several times in the course of the year to reinforce its content. You may select only a few topics to be analyzed in a particular chapter or unit. You can assign different topics to different members of the class—either individually or as small groups—and have the class build a report based on the total Framework, or the Framework can be used as the basis for a research paper, class report or media presentation.

We encourage you to work with your students in evaluating the topics listed in this Analytical Framework for Sustainable Development. A blank Framework is provided at the end of the chapter should you and your students care to modify the topics or expand on any of the categories.

SUSTAINABLE DEVELOPMENT AND WORLD HISTORY & CULTURES
ELEMENTS OF AN ANALYTICAL FRAMEWORK

"Sustainable development ... meets the needs of the present without compromising the ability of future generations to meet their own needs."	**ENVIRONMENT**	**DEVELOPMENT**		**EQUITY**
	Resources	Economic	Social	Social Justice
	Biosphere	Cultural	Political	End Poverty
GEOGRAPHIC				
Location				
Place				
Human-environment interactions				
Movement				
Regions - physical & human				
SOCIAL / CULTURAL				
Belief systems / religion & values				
Problem solving approaches				
Education				
Language				
Social groupings				
Gender roles				
Asthetic expression / arts				
POLITICAL				
Power				
Governmental system(s)				
Security				
Conflict & resolution				
ECONOMIC				
Systems of trade & exchange				
Producing & manufacturing				
Property				
Division of labor				
Physical quality of life				
Transportation system				
Tools / technology / research				
Population				

Sample Questions

Teachers are encouraged to involve their students in developing questions that will be used in analyzing a particular unit, period of history, or culture according to the topics suggested by this Analytical Framework.

The following questions are offered as beginning suggestions as to the kinds of questions that might be useful in seeing relationships between the elements of sustainable development (listed across the top) and the traditional social studies topics listed on the left side. The questions are listed in three columns according to the major elements of sustainable development. The main subtopics are also listed under each element as a reminder to develop questions across the breadth of these categories.

ENVIRONMENT	DEVELOPMENT	EQUITY
Resources	Economic/Political	Social Justice
Biosphere	Social/Cultural	End Poverty

GEOGRAPHIC

Location

Locate the place being studied on a world map. What are its latitude and longitude? How is it connected to the last place studied (e.g., by land, water, air currents, technology)?	Using latitude and longitude on a world map, locate: the highest mountain; major rivers; major settlements/cities. Why were these cities originally located where they were? How did this location affect the development of this society over time?	Are there locations in which there are concentrations of poverty or affluence? If so, how do you account for these concentrations?

Place

What are the distinctive physical characteristics (e.g. landforms, bodies of water, climate, soils, natural vegetation and animal life) that give this place its unique character?	What are the distinctive human characteristics (e.g., architecture, patterns of livelihood, land use and ownership, communication and transportation networks) that give this place its unique meaning?	How have languages, religions or political ideologies shaped the character of this place? Are the patterns of land use and ownership favorable or unfavorable to equity? Why?

ENVIRONMENT	DEVELOPMENT	EQUITY
Human-environment interactions		
What are three major effects that human activity has had on the environment of this particular place?	To what extent do people take into account the effect their actions might have on the environment? Why or why not?	What impact do wealthy people in this society have on the environment? What impact do poor people have on the environment?
Movement		
What natural resources are located in this place? How are they transported to other locations? To what extent are these resources being depleted and to what extent are they renewable?	What are the main means of travel? What communications systems are used? How have these transportation and communications systems affected the area's development?	To what extent do transportation and communications systems serve the needs of the indigenous people, or others? Why?
Regions—physical & human		
In what physical region is this society located? What are the physical characteristics that unify this region (e.g., grasslands, deserts, rain forests, mountains, polar)?	In what cultural region or regions is this society located? What are the human characteristics that unify this region? What human characteristics distinguish this region from bordering regions?	What resources in this region are used to indicate a person's relative wealth or poverty? To what extent is this wealth distributed widely or narrowly within the society? Why?

SOCIAL/CULTURAL

Belief systems/religion & values		
How do the society's belief systems view the environment? What impact do these beliefs have on the use of resources?	What roles do the religious beliefs of the people play in either helping or hindering economic development?	How does the society define fairness/justice?

ENVIRONMENT	DEVELOPMENT	EQUITY
Problem solving approaches		
Why should the environment be considered when solving problems?	What are some of the major problems this society has faced as it has developed over time? How have they solved these problems? What might we learn today from this experience about solving problems?	Is inequity a problem? How is the society trying to solve problems of inequity and with what results?
Education		
What role does informal education play in educating the society's members about the environment? Formal education?	What role does informal education play in economic development? Formal education?	To what extent is formal education available to all members of the society?
Language		
In what ways does the language that is used about the environment reflect society's attitudes toward the environment—e.g., "manage," "respect," "stewardship," "manipulate..."	To what extent does a common language aid in economic and social development? Are diverse languages an obstacle to economic, social, and political development?	In what ways, if any, does language reflect inequities in the society?
Social groupings		
What impact do the various social groupings have on the environment?	What impact do the society's groupings have on the social development? On economic development?	Is there social mobility? What are the factors that allow for it or inhibit it?
Gender roles		
Do males and females in the society have different impacts on the environment?	How do gender roles affect economic development? How have gender roles changed over time and why?	Is the society dealing with any social justice issues associated with gender roles? If so, what, e.g., suffrage, ownership of property, persecution...?

ENVIRONMENT	DEVELOPMENT	EQUITY
Aesthetic expression/arts		
In what ways do the arts express attitudes/values toward the environment?	In what ways, if any, do the arts demonstrate or criticize the society's beliefs about the meaning of the "good life?"	What social justice themes, if any, are treated in the arts? Give examples.
POLITICAL		
Power		
Who decides how resources are used? What sectors of society are exerting influence on pollution issues?	What is power and what are its sources?	To what extent do interest groups have power to influence the directions taken regarding the economy? Regarding the type of government?
Governmental system(s)		
Are there governmental agencies involved in environmental issues? What are their approaches and how effective are they in protecting the environment?	How does the form of government affect the rate of economic development?	In what ways, if any, are governmental systems working to end poverty within the country? ...in the wider world?
Security		
Do the people in this society feel environmentally secure or insecure? Why?	How can political security of a nation help it meet its present needs? How does the society define economic security? To what extent are native peoples' cultures protected and preserved?	What issues of social injustice or poverty, if any, threaten the stability of the society?

ENVIRONMENT	DEVELOPMENT	EQUITY
Conflict & resolution		
To what extent is there open conflict between economic interests and environmental groups? How is the conflict expressed? To what extent are there indications of resolution of such conflicts?	What are some of the competing claims or interests within the development process? What methods, approaches or institutions are used to manage or resolve conflicts?	What segments of the society have access to conflict resolution resources or institutions?
ECONOMIC		
To what extent is the economic system in harmony with the environment?	How do the forms of economic systems influence development?	Who makes the decisions in the various economic activities?
Systems of trade & exchange		
What natural resources are exploited or developed for purposes of trade and exchange? Which resources are nonrenewable and which are renewable?	What role does trade play in the society's process of economic development?	What provision, if any, is being made to assure future generations of access to the society's natural resources?
Producing & manufacturing		
What are the impacts on the environment made by the systems of producing and manufacturing? Which are positive and which negative?	Do the systems of producing and manufacturing tend to be labor-intensive or capital-intensive? What are some of the consequences of this tendency toward labor- or capital-intensity?	Do the systems of producing and manufacturing contribute to the elimination of poverty, or do they tend to concentrate power and wealth into the hands of fewer and fewer people?
Property		
What impact do ownership patterns have on the preservation of natural resources and the biosphere? (e.g. private vs. public, individual vs. group)	What impact do ownership patterns have on development?	Are there any restrictions on ownership of property? If so, what are they? What are the patterns of ownership of property in this society?

ENVIRONMENT	DEVELOPMENT	EQUITY
Division of labor		
To what extent does the division of labor result in more efficient methods for using resources? Does it increase the rate at which nonrenewable resources are being consumed?	What is the general division of labor used? Has it changed recently, or in the period being studied? To what extent does the division of labor and individual specialization lead to greater production of necessary goods and services?	What social justice issues are evident regarding the division of labor?
Physical quality of life		
How does the quality of life of this society depend on the environment? Environmentally speaking, what is the physical quality of life in this society? Is it improving, staying the same, or declining?	What is the PQL Index for this society? Specifically, what is the life expectancy rate? Infant mortality rate? Literacy rate? Does the GNP per capita adequately reflect the actual quality of life in this society? To what extent is the PQL Index an adequate measure of the quality of life of the people?	Critique the PQL Index as a means for judging the degree of fairness in a society. Between societies. Do the indices indicate whether equity is present?
Transportation system		
On what resources does the transportation system rely? What impact does the transporation system have on the environment?	What is the role of an adequate transportation system in economic development? In political and social development?	Who has access to what elements of the transportation system? What impact does this accessibility have on the way the society has developed economically and socially? What issues of access remain to be resolved?

ENVIRONMENT	DEVELOPMENT	EQUITY
Tools/technology/research		
What resources are required for the society's tools and technology? To what extent are these resources renewable, recyclable, or nonrenewable? What impact do the different technologies have on the environment?	What kinds of tools and technology are used in the society? In what ways has the introduction of new technology had unanticipated consequences for this society?	In what ways, if any, are the society's tools, technology and research capabilities being harnessed to end poverty within the society? In the wider world?
Population		
What impact does a growing or declining population have on the environment?	How does the age, size, and composition of the population impact on economic development?	What is the distribution of wealth and resources among the population?

Definitions and Examples

The Analytical Framework is a useful tool for infusing the concept of sustainable development into the units you teach throughout the year. This expanded section contains reference material explaining the analytical framework and supplements the chart on page 5-3 titled: *Sustainable Development and World History/Cultures: Elements of an Analytical Framework*. In this reference material, each element of the Geographic, Social/Cultural, Political, and Economic sections of the analytical framework is explained according to the following format:

A. **Definition of concept or term**

B. **Kernel relationship of the term to sustainable development**

C. **Examples.**

Part I. GEOGRAPHIC ELEMENTS

The five topics listed under "Geographic Elements" are the fundamental themes in geography that are currently being promoted by the National Council for Geographic Education, the Association of American Geographers and the National Geographic Society.

1. Location

A. **Definition**: Location answers the basic question: "Where?" Absolute and relative location are two ways of describing the positions of the Earth's physical and cultural features.

B. **Relationship to Sustainable Development:** Relative location refers to the many ways that places are connected, e.g., by land, by water, even by technology. These connections may have an impact on whether human activity will be sustainable over generations.

C. **Example:** The town of Chernobyl is located 51.16° north and 30.15° east, or 60 miles north of Kiev in the Soviet Union. On April 26, 1986, an accident at a nuclear reactor at Chernobyl caused the release of large amounts of radiation into the air. The outside world was unaware that anything was wrong until April 28th when nuclear technicians throughout Scandinavia

detected abnormally high radiation levels. A study of wind patterns for the previous few days showed that the source of the radioactivity was Chernobyl. (Almanac p.381)

2. **Place**

   A. **Definition:** All places on Earth have special features that distinguish them from other places and that can be described by physical and/or human characteristics.

   B. **Relationship to Sustainable Development:** One way to describe places would be by characteristics that indicate whether or not the human activity there meets criteria of sustainability. For example, heavily industrialized societies can be described in part as having high degrees of air pollution within their industrial regions, a problem to be addressed if those societies are to achieve sustainability.

   C. **Example:** "Cracow, Poland—This historic city of 800,000 people boasts 72 churches, 43 monasteries and 6,000 classic houses—all of which the government has declared to be national monuments. Preserving them, however, is proving to be a monumental task. While Cracow emerged from World War II untouched by bombing, emissions from a spate of peace-time metal and chemical industries now threaten to destroy its historic treasures with clouds of corrosive sulphur and fluoride-laden dust." (World Development, 3/90, pp. 8-9)

3. **Human-environment interactions**

   A. **Definition:** People interact with their environments and change them in different ways. Human-environment interactions thus describe relationships within places.

   B. **Relationship to Sustainable Development:** This theme is at the core of sustainable development, which strives to conserve the natural resource base and protect the biosphere.

   C. **Example:** "Environmental reviews of proposed development projects, begun in 1976 by the Agency [for International Development], created an effective vehicle to conduct a dialogue with decision makers in developing nations. Policy changes resulted. The Central Selva Resource Management Project, which began in 1982 in the jungle of Peru's Palcazu Valley, is an example. The government of Peru, in its initial

plans for the valley, projected large-scale agro-industrial development, including increased colonization of an area that contained large tracts of primary tropical rain forest... USAID's environmental assessment reoriented the project in favor of natural forest management as the principal activity with very limited small-scale agriculture in the area. No new colonists came to the valley. The existing inhabitants, including the Amuesha Indians, received title to their land and were legally recognized by Peruvian authorities...Through a subsequent loan agreement with USAID, the government of Peru designated part of the area as a national park and a protected forest." (USAID, p.6)

4. **Movement**

   A. **Definition:** Movement refers to mobility of people, goods and ideas.

   B. **Relationship to Sustainable Development:** One of the main reasons for large movements of people over time has been the search for a safer, more secure and sustaining place in which to live. These movements also have a major impact on the environment.

   C. **Example:** "The health and nutritional status of some of the Sudanese refugees now arriving [May 1988] in western Ethiopia is as bad or worse than anything seen during the terrible famine of 1984-6...The refugee situation in western Ethiopia is not new. Uprooted Sudanese started to arrive in substantial numbers during the first few months of 1983, fleeing from the intensifying conflict within the southern part of their homeland. Within three years their number had risen to just over 80,000, and by the beginning of 1987 the refugee population in Ethiopia stood at around 130,000...In the last six months [December 1987—May 1988] this situation has taken a dramatic turn for the worse, as the continuing civil strife in Sudan has been exacerbated by drought and acute shortages of food." (Refugees, p.15)

5. **Regions**

   A. **Definition:** Regions are areas on the surface of the Earth that are defined by certain unifying characteristics, which may be physical or human.

B. **Relationship to Sustainable Development:** One way to study a region is to analyze those physical and/or human characteristics that support sustainability within the region and those characteristics that undermine sustainability.

C. **Example:** From 1968 to 1973, the Sahel Region in Africa was mostly identified in the mass media as a region of famine, resulting in part from a severe drought.

Part II. SOCIAL/CULTURAL ELEMENTS

6. **Religion, belief systems and values**

   A. **Definition:** significant ideas and concepts that guide behavior

   B. **Relationship to Sustainable Development:** Sustainable development recognizes that significant ideas and concepts that guide behavior such as traditional customs affect economic, social, and cultural development.

   C. **Example:** "...the modern economist has been brought up to consider 'labour' or work as little more than a necessary evil....The Buddhist point of view takes the function of work to be at least threefold: to give a man [sic] a chance to utilize and develop his faculties; to enable him to overcome his ego-centredness by joining with other people in a common task; and to bring forth the goods and services needed for a becoming existence....the consequences that flow from this view are endless." (Small Is Beautiful, pp. 54-5)

7. **Problem solving approaches**

   A. **Definition:** methods of creating or discovering solutions

   B. **Relationship to Sustainable Development:** Sustainable development is open to a wide variety of methods through which people around the world discover their own solutions to meet the needs of the present without compromising the ability to meet future needs.

   C. **Example:** Traditionally, various ethnic groups of Zaire used the Garcinia punctata tree as a prescription for diarrhea. They have used the resources of their environment to solve many of their health problems, and this information is being

researched in modern laboratories for use in modern societies. For example, plants grown in Madagascar have been used in developing certain treatments such as for Hodgkins disease and some forms of leukemia in children. This traditional problem solving approach is proving invaluable to modern science.

8. **Education**

   A. **Definition:** process of formal or informal learning

   B. **Relationship to Sustainable Development:** Through formal or informal learning, people can learn to meet their needs without compromising the ability of future generations to meet their own needs by solving problems, anticipating alternative consequences, evaluating results and identifying personal and group responsibility.

   C. **Example:** "Chaguite Grade, Honduras—It is late afternoon in this remote mountaintop village, and school is out for Norberto Coronado Andino, a fifth grader. But he remembers his environmental ABCs. 'You don't cut trees, you save them,' he tells a visitor. 'We need them to earn money, for the fresh air and because there would be no water without them.' Forty kilometres away, in El Achiote, Andres Mesa has continued farming and building a community three years after trees were cleared by the traditional slash and burn method. He used to seek out new forest land every few years. Encouraged by new farming techniques and seed varieties that he has been shown by extension agents [from Honduras' National School of Forestry Science], he has terraced the side of hills, sown corn, planted fruit trees and begun agitating for a better road into the village. 'We get ideas from elsewhere, but it is self-development,' he boasts." (World Development, 1/90, p.20)

9. **Language**

   A. **Definition:** A systematic means of communicating ideas or feelings by the use of conventionalized signs, sounds, gestures, or marks having understood meanings; the expression of thoughts, feelings, and concepts

   B. **Relationship to Sustainable Development:** Sustainable development depends upon the ability of people throughout a society to communicate effectively.

C. **Example:** The population of Tanzania in East Africa is made up of over 123 distinct ethnic groups speaking separate languages as different as Chinese is from Greek. However, since independence, Swahili has been used as the national language and has served to unite the various ethnic groups into one nation. As a result, the individual has an identity as a Tanzanian citizen in addition to his or her identity as a member of a particular ethnic group. Leaders in Tanzania speak several languages: the language of their ethnic group; Swahili, the national language of Tanzania; and English.

10. **Social groupings**

A. **Definition:** a recognizable unit of people with common characteristics and interests

B. **Relationship to Sustainable Development:** Through sustainable development, groups would meet their own needs without compromising the needs of the future and the ability of other groups to meet their own needs.

C. **Example:** The Minority Farmers' Rights Act (S 2881) was passed in the U.S. Senate as an amendment to the Farm Bill on July 26, 1990, by unanimous consent. The bill, which requires approval in the House of Representatives, seeks to halt minority land loss and rebuild the minority agricultural land base in every region of the United States and seeks to eradicate discrimination and indifference to minority farmers from all Department of Agriculture programs. More than 50 minority farmers from the Federation of Southern Cooperatives/Land Assitance Fund, the Arkansas Land and Farm Development Program, the Rural Advancement Fund and the Land Loss Prevention Project lobbied their members of Congress in Washington. Interfaith Action for Economic Justice, the National Family Farm Coalition and more than 80 other organizations demonstrated their support. (Big Win, p.1)

11. **Gender roles**

A. **Definition:** Socially expected behavior patterns or functions attributed to males or females in a particular society

B. **Relationship to Sustainable Development:** Societies ascribe different roles and functions to men and women. Sustainable development requires a sensitivity to traditional

gender roles, to role changes taking place within societies, and to the involvement of both men and women in development strategies

C. **Example:** "Women farmers, though they play a critical role in food production, are often ignored by programmes meant to improve production. In Latin America, the Caribbean, and Asia they form a large agricultural labour force, while most of sub-Saharan Africa's food is grown by women. Yet almost all agricultural programmes tend to neglect the special needs of women farmers." (OCF pp. 124-5)

12. **Aesthetics/arts**

A. **Definition:** the expression of human creativity

B. **Relationship to Sustainable Development:** Through aesthetic expression and the arts, people reveal the values that affect their lives. These creations reveal their particular worldview, and their aspirations and goals as they strive for sustainable development.

C. **Example:** "The Gambia—A programme of drama performances has been initiated in Banjul and the provinces in order to reinforce efforts in the child survival campaign. The objective of the drama series, supported by UNICEF in collaboration with the national Medical and Health Department, is to stimulate social mobilization and spread health messages at the grass-roots level. Activities centred on promoting immunization, oral rehydration therapy (ORT) and regular attendance at post-natal and pre-natal clinics. All performances have been well attended." (African Kora p.8)

Part III. POLITICAL ELEMENTS

13. **Power**

A. **Definition:** the ability to act; the ability to influence and control individuals or groups

B. **Relationship to Sustainable Development:** Sustainable development depends upon sharing power in society.

C. **Example:** The apartheid system of South Africa has systematically excluded Black South Africans from access to the

society's institutions of political and economic power. Their human rights have been blatantly violated and injustices abound. For example, 14% of South Africa's land has been allocated to the Black majority which makes up approximately 72% of the population. Consequently, the existing government in South Africa is being pressured by the anti-apartheid struggle within South Africa and internationally to dismantle the structures of apartheid and share power with all persons and groups within that country.

14. **Governmental system**

   A. **Definition:** The organization through which a political unit exercises authority and performs functions according to the distribution of power within it

   B. **Relationship to Sustainable Development:** In order to achieve sustainable development, governmental systems must reflect the views of a wide constituency in the society and include protection of the biosphere in policy decisions.

   C. **Example:** In Argentina, rules for selecting a president agreed upon by a wide constituency of the society are lacking. Force is often more important than law or tradition, and wealthy agricultural and industrial elites often influence the choice of president. As a consequence of this inequity, only one elected government has served out its term in Argentina in over 40 years.

15. **Security**

   A. **Definition:** Freedom from want, danger, fear, anxiety

   B. **Relationship to Sustainable Development:** "The whole notion of security as traditionally understood—in terms of political and military threats to national sovereignty—must be expanded to include the growing impacts of environmental stress—locally, nationally, regionally, and globally. There are no military solutions to 'environmental insecurity.'" (OCF p.19)

   C. **Example:** "The world spent well over $900 billion on military purposes in 1985, more than $2.5 billion a day. The real cost is what the same resources might otherwise be used for:

- An Action Plan for Tropical Forests would cost $1.3 billion a year over the course of five years. This annual sum is the equivalent of half a day of military expenditure worldwide.
- Implementing the UN Action Plan for Desertification would cost $4.5 billion a year during the last two decades of this century—the equivalent of less than two days of military spending.
- ...The UN Water and Sanitation Decade...would have cost $30 billion a year during the 1980s. This is the approximate equivalent of 10 days of military spending.
- To supply contraceptive materials to all women already motivated to use family planning would cost an additional $1 billion per year on top of the $2 billion spent today. This additional $1 billion is the equivalent of 10 hours of military spending." (OCF p. 303)

16. **Conflict and resolution**

A. **Definitions:**

- Conflict results from differences that emerge between two or more parties over a common issue or concern.
- Conflict resolution—agreed-upon actions that lead to the end of conflict

B. **Relationship to Sustainable Development:** Movement toward sustainable development may cause conflicts which will require resolutions within a society or among countries.

C. **Example:** "As one chapter of our international fisheries relations has come to a close, other international areas are requiring more of our attention....The first area involves the question of how to deal with fishery stocks which are partly in the U.S. zone and partly in either the zones of neighboring countries or in the high seas areas beyond the 200-mile jurisdiction of any nation. For example, one of the main issues we face in the North Pacific is the dramatically increased level of fishing by third countries in the Bering Sea beyond 200 miles, the so-called donut area. In this region, fishing vessels from Japan, Korea, Poland, and China have concentrated their efforts and increased harvests of pollock from some 100,000 MT [metric tons] in 1984 to about 1.3 million MT in 1988. This

is totally unacceptable. According to our scientists this dramatic increase in fishing is adversely affecting economically vital U.S. pollock stocks as well as other stocks in the Bering Sea. We are currently working with the Soviet Union, the other Bering Sea coastal state, to develop measures for addressing the unregulated fisheries in the donut area. In these talks, the United States has proposed calling for a temporary moratorium on fishing in the donut by all countries, including the United States, until an adequate multilateral conservation regime for the region can be established." Edward E. Wolfe, Deputy Assistant Secretary for Oceans and Intrnational Environmental and Scientific Affairs (Current Policy p.2)

Part IV. ECONOMIC ELEMENTS

17. **Systems of trade and exchange**

    A. **Definition:** methods of exchanging goods and services within a society and with other societies

    B. **Relationship to Sustainable Development:** Sustainable development depends on ecologically safe and equitable systems of trade and exchange on national and international levels.

    C. **Example:** "Two conditions must be satisfied before international economic exchanges can become beneficial for all involved. The sustainability of ecosystems on which the global economy depends must be guaranteed. And the economic partners must be satisfied that the basis of exchange is equitable; relationships that are unequal and based on dominance of one kind or another are not a sound and durable basis for interdependence. For many developing countries, neither condition is met." (OCF p.67)

18. **Producing and manufacturing**

    A. **Definition:** the creation of goods such as capital resources and consumer goods

    B. **Relationship to Sustainable Development:** "Many essential human needs can be met only through goods and services provided by industry, and the shift to sustainable development

must be powered by a continuing flow of wealth from industry." (OCF p.16)

C. **Example:** "If industrial development is to be sustainable over the long term, it will have to change radically in terms of the quality of that development, particularly in industrialized countries....In general, industries and industrial operations should be encouraged that are more efficient in terms of resource use, that generate less pollution and waste, that are based on the use of renewable rather than nonrenewable resources, and that minimize irreversible adverse impacts on human health and the environment." (OCF p.213)

19. **Property**

A. **Definition:** the land, resources, wealth, means of production, goods and services owned by individuals or groups

B. **Relationship to Sustainable Development:** Inequities in access to property can undermine productivity and long-term sustainability.

C. **Example:** "In many countries where land is very unequally distributed land reform is a basic requirement. Without it, institutional and policy changes meant to protect the resource base can actually promote inequalities by shutting the poor off from resources and by favouring those with large farms, who are better able to obtain the limited credit and services available....In many countries women do not have direct land rights; titles go to men only. In the interests of food security, land reforms should recognize women's role in growing food. Women, especially those heading households, should be given direct land rights." (OCF p. 141)

20. **Division of labor**

A. **Definition:** a specific task assigned to each worker in agricultural or industrial production which enables a given item to be produced more efficiently and at a lower cost

B. **Relationship to Sustainable Development:** The division of labor has led to lower costs, partly because broader environmental costs have not been factored into pricing. Products have become more affordable for more potential consumers. Serious problems, however, have also resulted from means of

production based on the division of labor. Among them are social stratification, abuse of and undercompensation for workers—including children, alienation from meaningful work, tremendous waste in consumer societies, and environmental degradation. Sustainable development depends on increased productivity for meeting human needs, which can result from the division of labor, on equitable compensation for workers, and on an ecological ethic regarding the impact of the means of production on the environment.

C. **Example:** Specialization of labor was a major factor contributing to the material successes of the Industrial Revolution in Europe. As a result, people's life styles and quality of life changed dramatically—positively as well as negatively—as their lives were reorganized according to the needs of the factory system, as products of the Industrial Revolution became more available, and as the environmental impacts became apparent.

21. Physical quality of life/physical quality of life index

A. **Definition:** A composite measure of human wellbeing based on social indicators, viz., life expectancy, infant mortality rate, and literacy rate. The Physical Quality of Life Index (PQLI) was developed by the Overseas Development Council.

B. **Relationship to Sustainable Development:** Sustainable Development requires that the Physical Quality of Life be high enough to guarantee a reasonable existence for the people. The Physical Quality of Life can be described subjectively through descriptions of living conditions or objectively through the analysis of statistics. The three indices of the PQLI—life expectancy, infant mortality rate, and literacy rate—are each based on a scale of 1 to 100. The PQLI is an average of these three with 100 at the top and 1 at the bottom. Since this composite index, calculated by averaging the above three indices, is free from the distortions of monetary measurements, such as GNP, it may be a more accurate measure of the relative relationships of nations. It also avoids the problems of absolute standards, e.g., calorie intake, for which there may not be agreement. Because it is concerned with basic and universal human needs, the PQLI may be applied to all nations with equal validity.

C. **Example:** There tends to be a correlation between the PQLI and GNP per capita, but there are significant divergences. The oil rich Arab states have high per capita GNPs but low PQLIs, while the island of Sri Lanka with a low per capita GNP has a very high PQLI. Australia, France and Iceland with PQLIs of 100 are ranked 1, 2 and 3. The United States is 15th with a 98, while Ethiopia with a PQLI of 25 is ranked 169.

22. **Transportation systems**

A. **Definition:** methods used to move goods, services, resources, and people, taking into account the extent of the area covered as well as the speed and cost of transportation

B. **Relationship to Sustainable Development:** Efficient transportation systems foster economic opportunities for some individuals and societies. However, these systems may put greater strain on the environment.

C. **Example:** In the 1950s the Brazilian government developed plans for a system of highways crisscrossing the Amazon Jungle. After three decades, these roads have encouraged exploration, mining and logging. One consequence of the resultant large scale development projects has been the threatened extinction of thousands of species of plant and animal life, many of which species have not even been identified by scientists yet. (Brazil, p.19)

23. **Tools/technology/research**

A. **Definitions:**

- Tools - methods for increasing productivity and efficiency
- Technology - the sum of knowledge of the means and methods of producing goods and services
- Research and development - the basic applied research directed to the discovery, invention, and design of new products and processes

B. **Relationship to Sustainable Development:** "Technology will continue to change the social, cultural, and economic fabric of nations and the world community. With careful management, new and emerging technologies offer enormous opportunities for raising productivity and living standards, for

improving health, and for conserving the natural resource base. Many will also bring new hazards, requiring an improved capacity for risk assessment and risk management." (OCF p. 217)

C. **Example:** "Biotechnology will have major implications for the environment. The products of genetic engineering could dramatically improve human and animal health. Researchers are finding new drugs, new therapies, and new ways of controlling disease vectors. Energy derived from plants could increasingly substitute for nonrenewable fossil fuels. New high-yield crop varieties and those resistant to unfavourable weather conditions and pests could revolutionize agriculture. Integrated pest management will become more common. Biotechnology could also yield cleaner and more efficient alternatives to many wasteful processes and polluting products. New techniques to treat solid and liquid wastes could help solve the pressing problem of hazardous waste disposal." (OCF pp. 217-8)

24. Population

A. **Definition:** the people of a specific society

B. **Relationship to Sustainable Development:** Sustainable development envisions balance between the size and growth rate of the population and the distribution and use of resources.

C. **Example:** "Population growth and development are linked in complex ways. Economic development generates resources that can be used to improve education and health. These improvements, along with associated social changes, reduce both fertility and mortality rates. On the other hand, high rates of population growth that eat into surpluses available for economic and social development can hinder improvements in education and health....in the absence of deliberate measures, the imbalance between population growth and resource development will worsen." (OCF pp. 96, 97)

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AN ANALYTICAL FRAMEWORK FOR SUSTAINABLE DEVELOPMENT

"Sustainable development...meets the needs of the present without compromising the ability of future generations to meet their own needs."

TOPICS	**ENVIRONMENT** Resources, Biosphere	**DEVELOPMENT** Economic, Political, Cultural, Social	**EQUITY** Social Justice, End Poverty

DIRECTIONS:
1. Write topics you are analyzing in the narrow column on the left.
2. Write questions about the relationship of each topic to the elements of sustainable development in the large blocks.
3. Research these topics to answer the questions you have generated.

BEST COPY AVAILABLE

A Bountiful Paddy Harvest

Gayathri Fernando
Age 9
Sri Lanka

Chapter 6

Annotated List of Lessons for Teaching Sustainable Development

Introduction

The purpose of this list is to create an index of learning activities for incorporating the concept of sustainable development into the World History/ Cultures curriculum. Sustainable development can be applied to the study of history, geography, and cultures by incorporating these lessons in order to develop skills and concepts related to sustainable development. Rather than presenting sustainable development as a concept in isolation, we would encourage the selection of several of these learning activities for use throughout the curriculum, thereby making development concerns relevant to the past, present and future.

Rationale for Selection

The rationale used in selecting learning activities for this list included:

1. Does the activity include learning objectives relevant to sustainable development?

2. Does the activity engage the student in the learning process?

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3. Does the activity encourage a balanced view of the topic being taught?

4. Does the activity discourage judgmental attitudes, stereotyping and ethnocentrism?

5. Is the activity student level appropriate? (Secondary level)

This list is not meant to be all inclusive. We relied exclusively on resources available to us at Global Learning. Financial limitations and time restrictions have resulted in this incomplete list, which we believe represents a small portion of the activities available for teaching sustainable development.

Organization

The list is organized into the following categories:

1. **Awareness** (basic concepts such as interdependence, cooperation, conflict), Page 6-4

2. **Communication**, Page 6-5

3. **Development—Economic**, Page 6-5

4. **Development—Physical Quality of Life**, Page 6-9

5. **Distribution of Resources** (food, water, minerals, renewables and nonrenewables), Page 6-10

6. **Environment/Biosphere** (environment, the commons), Page 6-12

7. **Energy**, Page 6-15

8. **Equity/Social Groupings** (gender, fairness, social class), Page 6-17

9. **International Economy** (trade, multinational corporations' production, trade barriers), Page 6-22

10. **Population**, Page 6-26

11. **Security** (conflict), Page 6-27

Beginning on page 6-29 of this chapter you will find the bibliographic sources for all of the activities included in the list, arranged alphabetically according to key words. These key words follow the lesson title and are capitalized within parentheses, e.g., (OTERO). An alphabetic index by world region begins on page 6-32 and by lesson title on page 6-33.

Sample Placement of Lessons

The following is presented as an example for placement of sustainable development lessons in traditional preindustrial periods in history. This sample is offered to help guide you in a few of the possible ways to infuse development issues early in the chronology of a World History course. We hope that by introducing these topics early in the course, students will recognize the relevance of history to our contemporary world.

Time Period:	Ancient Civilizations
Development Topics:	social class divisions, unequal distribution of resources, poverty, geographic determinism
Lessons:	Star Power, p. 6-20; Call Them As You See Them, 6-17; Apartness, p. 6-17; Go With the Flow, p. 6-11
Time Period:	Classical Civilizations
Development Topics:	social class divisions, trade, early imperialism, economic development
Lessons:	The Lion's Share, p. 6-11; The Peloponnesian War, p. 6-9; Why Do People Trade?, p. 6-26; Why Do People and Nations Trade? p. 6-26
Time Period:	World Religions
Development Topics:	values and belief systems
Lessons:	Identifying and Applying Values to Environmental Issues, p. 6-14; Folk Tales From Around the World, p. 6-18; Origins of Attitudes About Women p. 6-19
Time Period:	Age of Exploration and Imperialism
Development Topics:	control of the seas, distribution of resources, equity , nationalism
Lessons:	Control of the Seas, p. 6-13; Ocean Boundaries and Resources of the Seas, p. 6-14; Our World Today, p. 6-5; Grab the Bananas, p. 6-4; Decide a Plan, p. 6-10; Resources for Self-Reliance p. 6-11
Time Period:	Industrial Revolution
Development Topics:	population, ecosystem, distribution of resources, interdependence, equity, trade, economic and social development
Lessons:	Demise of the English Commons System, p. 6-13; Introduction to Development, p. 6-8; Energy Transitions and Social Change, p. 6-15; Earth's Disappearing Tropical Forests, p. 6-13; Build a Better Smokestack p. 6-13

Annotated List of Lessons

In order to use any of these annotated lessons, you will have to order the materials directly from their publishers. The name in parentheses following each title is the name by which the individual lessons are identified. For example, the first entry under Category 1, **Analyzing Our International Activities and Linkages**, (MERSHON 2), comes from Woyach, Robert B., et al., *Bringing a Global Perspective to World Geography*. (Sources begin on page 6-29.)

CATEGORY 1: AWARENESS

Analyzing Our International Activities and Linkages, (MERSHON 2), Inventory and mapping activities in which students discover systems of international activity that affect them personally and then compare the diversity of those linkages. They will notice that patterns of activity are not uniform. This activity could be used when discussing historic trade routes.

Broken Squares, (FENTON), Simulation activity which could be used on many levels to stress the importance of cooperation in problem solving. Students are divided into small groups and given a packet of pieces of cardboard. In order for each group member to accomplish their goal of making a complete square, students must cooperate. The author suggests using it as a springboard activity when introducing the concept of the global village. There is another excellent application suggested where the teacher uses a broken square with the terms social justice, economic growth, and self-reliance written on three pieces as a way to introduce development issues.

Good News Bad News, (OTERO), Activity which encourages students to categorize information and understand the importance of using multiple sources when evaluating global issues. Information used in this activity deals with issues of population growth and resources.

Grab the Bananas, (OTERO 1), Simulation exercise which illustrates aspects of conflict. Students are placed in the roles of shipwreck survivors who can harvest only 4 bananas a day for their survival. During 10 rounds of play, students decide whether they will grab all four bananas for themselves or share with their partner. Issues of trust, cooperation, violence, as well as the nature of conflict itself are covered through debriefing questions. Possible correlations can be made with the arms race, the commons, the environment, imperialism, etc.

Our World Today, (FRANZ), Reading and map activity with questions designed to help students identify labels for development, (*Third World*, North, etc.), and to question the validity of these labels. Note: There is an excellent cartoon on the back leaf of this guide that illustrates this lesson.

Problems in the Third World, (FRANZ), Readings and questions designed to help students identify problems facing the *Third World*. Students are asked to identify interrelationship of problems and the effect of *Third World* problems on the U.S. Mexico City, Mexico, and Tulungatung, the Philippines are used as case studies.

The Rice Game, (OTERO 1), Simulation exercise in which students experience group consensus by learning to compromise. During the simulation, students are asked to estimate how many grains of rice there are in a small container. They are then asked to reach a consensus with a partner, then another couple and so on until the class has reached a single estimate through consensus. The debriefing questions point to a discussion of the validity of using estimates. This exercise is very open-ended and would be appropriate when discussing decision making (e.g., forms of government) or when introducing topics that rely on data (e.g., population).

CATEGORY 2: COMMUNICATION

Communication—One-Way and Two-Way, (FENTON), Simulation-demonstration activity in which the teacher selects two students who must follow instructions in an attempt to draw a complex diagram of squares. These students are not able to ask questions. During the second round, the entire class attempts to draw the diagram, but they are permitted to communicate with the teacher and others in the room. This activity is excellent for illustrating the importance of communication for understanding on a global level.

Dialectical Diversity, (SANBORN), Map reading activity used to encourage an understanding of the relationship between language and culture.

CATEGORY 3: DEVELOPMENT Economic

The Challenge for Africa, (FRANZ), Fact sheet and role play activity provide an opportunity for students to consider the effects of colonial imperialism and options for economic development in Africa. This can be used in a unit on imperialism. CAUTION! This activity does not present specific options for development, and therefore should be used only after discussion of options for

sustainable development have been discussed or the students will be overwhelmed! You may want to use *Africa's Development Policy,* Activity 8c, in this source as a debriefing tool. It presents the United Nations Programme of Action for African Economic Recovery and Development, which was adopted in June 1985 at a Special Session of the General Assembly.

The Circle of Poverty, (FRANZ), Reading and writing assignment, including an excellent diagram and political cartoon designed to help student understand the reason why development in a poor country is difficult. Questions lead student to an appreciation for the vulnerability of these countries to outside forces.

The Debt Game, (BRADY), Simulation game in which students experience the debt crisis as structural injustice. Students are divided into three groups, representing *developing* and industrial nations and the international banking structure (commercial and multilateral banks). Through the simulation, students can understand the global effects of debt on economic development. They recognize the pressures on *developing* nations to cooperate with other *developing* nations, to compete with them, to follow the rules of international economic order, and to act on behalf of their own population. Excellent debriefing questions encourage consideration of alternatives for development that can provide a good way to introduce sustainable development.

The Development Data Book, (WB), Skills-oriented activity book that encourages an understanding of economic development and social and economic conditions in *developing* countries. Activities include: statistical calculations; use of maps, charts and graphs; making inferences; synthesizing information; problem solving and critical thinking. Culminating activities lead directly to issues of sustainable development. Fine test at the end of teacher's guide.

Development Planning and the Local Budget in the Republic of Pedogogia, (VENGROFF), simulation/role play in which students play the roles of administrative and elected officials in the process of planning a budget for economic development of a district in a *developing* country. Through memoranda from outside interests, students are swayed to focus on differing priorities. The goal is to ratify a budget. Good activity after development has been discussed.

Dots, (OTERO), Interactive activity in which students identify relationships among actors for production of food. Using strings or the handout, students make connections that illustrate interdependence.

Facts About Developing Countries, (SPICE), Introductory skills activities designed to introduce the student to economic indicators of development. Stres-

ses understanding of the differences between *developed* and *developing* countries.

An Introduction to Angola and Mozambique, (GLOBAL CONCERNS), A curriculum guide that includes 8 lessons about the development of Angola and Mozambique from precolonial heritage to the organization of SADCC (Southern Africa Development Coordination Conference) in response to South Africa's interference with their sustainable development. Lessons found in this packet are outlined below. The authors include suggestions for selection if all 8 lessons cannot be used.

1. **Introduction to the Continent of Africa**—Map and interpretation questions which can be used to introduce the geography of the continent, explore personal perceptions about Africa, and address the colonial roots of modern Africa. Teachers involve students in this very complete introduction through direct questioning and excellent maps.

2. **Introduction to Mozambique**—Timeline and play which outlines colonial history and the struggle for independence in Mozambique. Debriefing questions encourage relating this lesson to the movement for racial equality in the U.S.

3. **Current Situation in Mozambique**—Profile sheet, map, and flow chart for student completion encourage an understanding of the importance of geography to the development of Mozambique and the impact of sabotage on that development. By completing the flow chart, students can compare key economic indicators of the U.S. and Mozambique to recognize the effects of the S. African campaign against Mozambique and the role of the U.S. in supporting that campaign.

4. **Introduction to Angola**—Timeline and map help students trace the history of Angola pre- and postcolonialism. Students are introduced to the FNLA and UNITA and the role of the U.S. and S.A. in UNITA.

5. **Current Situation in Angola**—Map, profile and flow chart of Angola for student completion encourage an understanding of the role of geography in the development of Angola and recognize the differences in key economic indicators when comparing Angola to the U.S.

6. **Comparison of U.S./Africa/Mozambique/Angola**—Flow chart and timeline are used to answer the question: "Why did the U.S. develop so differently than those African colonies?" Students compare key economic indicators and histories of the countries to brainstorm their conclusions.

7. **Southern Africa Development Coordination Conference (SADCC)**—Map and fact sheet used to stimulate a brief research activity about the countries of SADCC and to understand the purpose of the organization. The role of S.A. and the U.S. in undermining the efforts of the organization is also addressed.

8. **Call to Action**—Role play and letter writing activity in which students clarify their opinions about the role of S.A. and the U.S. in the sustainable development of the SADCC countries. Addresses for letter recipients and quotes for the role play are provided.

Introduction to Development, (FRANZ), Reading and writing assignment uses Brazil and India as examples of options for development. Illustrates the limitations of development and could be used as case studies of traditional development patterns for comparison with sustainable development. Parallels to US/European industrial revolution are drawn, and the project's Analytical Framework would fit into both readings.

Life Expectancy at Birth—Poster Kit Number 1, (WB 1), Skills activities designed to explain life expectancy in terms of economic development and standard of living. Activities include vocabulary, maps, charts, tables, photographs, discussion questions and a role play.

The Maggots and the Carcass: A Fable of North-South Relations, (SANBORN), Reading of a fable and discussion to interpret its symbols in which students understand the concept of north-south relations and compare the perspectives of *developing* and industrialized nations.

Newly Industrialized Countries: Moving On Up?, (HURSH), Atlas and worksheet activity in which students understand the NIC classification and critically analyze its limitations in accurately categorizing nations. Students are asked to forecast the future of those nations. Research topics included.

The NIEO: Justice or Blackmail?, (HURSH), Atlas and short reading in which the students evaluate the proposals of the New International Economic Order (NIEO) for fairness and feasibility. Good idea for a debate, but requires more than what this lesson presents as resources.

Rich Nations/Poor Nations, (HURSH), Atlas worksheet activity in which students use the atlas to find evidence of a *gulf* between the haves and have-nots. Students identify basic needs denied to those have-not nations and brainstorm ways of breaking the cycle of poverty.

CATEGORY 4: DEVELOPMENT Physical Quality of Life

The Doctors of Nigeria, (SANBORN), Film (rental information included in lesson) and discussion activity in which students appreciate the transition of Nigeria's traditional healing practices to more modern forms of medicine. Illustrates the more positive and less invasive side of development.

Health is Basic, (WHERE), Activity including brainstorming, discussion and data analysis that defines health and its relationship to development. Includes a worksheet using health, social and economic indicators.

Living in the Third World: What Would You do?, (FRANZ), Reading and questions for discussion that encourage an understanding of the personal dimension of life in the *Third World*. Encourages a consideration of resources and alternative courses of action for each situation described. Burkina Faso, Mexico, Brazil, and Tanzania are the settings for the situations presented.

The Peloponnesian War—Theme #7 Activity 1, (SCHWARTZ), Activity using The Peloponnesian War by Thucydides to illustrate the impact of disease on Athens during the fifth century B.C.

Primary Health Care, (WHERE), Lecture material and case study regarding characteristics of primary health care and its impact on development. Group activity using case study can lead to discussion about the importance of health in sustainable development.

Underdevelopment: Myth or Reality, (SANBORN), Mini research project in which students are asked to draw conclusions about the state of India's development. Offers an opportunity for students to challenge the use of economic measures in determining level of development.

What is Development?, (SPICE 1), Group brainstorming activity in which students work to formulate a definition for development, its effects on quality of life, and clarification of development terms. Includes a glossary of terms and readings on development.

Why Underdevelopment?, (FENTON), Film and group decision-by-consensus activity using a film, *Flavio,* (rental information in the lesson), and a group summary sheet to determine the causes of underdevelopment in a given social situation. Teachers may want to add to, or delete from, the causes listed on the sheet, or have the class draw up their own list.

CATEGORY 5: DISTRIBUTION OF RESOURCES

Apples, (OTERO), Simulation encourages examination of values and models that determine distribution of scarce resources.

Decide a Plan, (OTERO), Reading and writing activity designed to introduce three alternative solutions to food shortage and population growth (triage, lifeboat, food bank) and encourages articulation of value position. Reading based on a letter from Java to the U.S.

The Descent into Hunger, (WRIGHT), Reading of what you would have to give up if you lived in a *developing* part of the world.

Developing Country—Developed Country, (KATZ), Skills activity in which students compare their caloric and protein intake to that of *developing* countries. Skills include reading a table, making a bar graph and analyzing data. Post-activity questions encourage consideration of unequal distribution of food and can lead to further discussion of the effects of overproduction in *developed* nations on the economies of *developing* nations.

Food Aid: When and How Much?, (OTERO), Simple role play activity that demonstrates complexities of making decisions about aid. Encourages values clarification and can be extended to include discussion of alternatives to financial aid.

Food for the Future, (ZERO), Research activity in which students are divided into teams that must make proposals for improved food production. Ten methods for increasing food production are presented in the activity. Students must research the pros and cons of options they are considering. A team of judges selects the best plan. An extension activity is also presented in which students must consider their own diets and plan a better diet. This activity is a good long-term assignment that can be used at the end of a unit on resources to evaluate a student's grasp of sustainable development.

Food Power, (OTERO), Worksheet design to encourage an understanding of power factors when decisions about food distribution are made on a global scale. Students rank order solutions based on their pre- and post-discussion of who has power and authority to implement solutions.

Follow-up Activity #3, (WRIGHT), Object lesson using M&Ms to illustrate distribution of material wealth in the world.

For Never More, (ZERO), Research and chart activity in which students must chart the sources, uses, and users of non-fuel minerals to illustrate the relationships and dependencies between source and recipient countries. An optional activity illustrates trading of nonrenewable resources.

Go with the Flow, (ZERO), Reading and board game in which students learn about the historic uses for water and modern water problems. An excellent way to introduce water as a resource and put it in a historic context while discussing current and future problems of management.

The Lion's Share, (ZERO), Skills activity in which students study the relationship between income and family size as an aid to seeing how a country's per capita income varies with its population and G.N.P. This is a good lesson for helping students to relate on a personal level to a global situation. Data used in this activity are dated and should be updated.

Mineral and Energy Resources, (SPICE 1), Map activity and case study in which students define mineral and energy resources. Using Africa as an example, students will understand that although resources may be plentiful, they are not utilized or distributed evenly. The case study, *Zambia Struggles with the Plight of Have-Not Nations*, illustrates an example of mal-development and reliance on one raw material for trade. Problems such as urban development, debt, dependence on foreign exchange, and breakdown of farming are highlighted.

Protein Possibilities, (KATZ), Activity in which students are asked to evaluate alternatives for alleviating the world food problem. Choices are placed on a *Protein Possibilities Ladder*. Alternatives presented lead to discussion of choices for sustainable development.

Resources as a Product of Culture, (SPICE 1), Reading and Decision Making Simulation in which students distinguish between self-reliance and self-sufficiency. The reading acquaints the student with the colonial roots of trade-related problems and development in Africa. A partial treatment of the Lagos Plan for Action is presented and students are encouraged to use it as a framework for their decision making during the simulation of mineral management, education development, and agricultural export management.

Resources for Self-Reliance, (SPICE 1), Reading and decision making simulation in which students distinguish between self-reliance and roots of trade-related problems and development in Africa. A partial treatment of the Lagos Plan for Action is presented, and students are encouraged to use it as a framework for their decision making during the simulation of mineral management, education development, and agricultural export management.

Rich Man Poor Man, (WRIGHT), Simulation of money supply and food acquisition. Plan a well-balanced menu for one day on varying amounts of money.

The Tootsie Roll Game, (OTERO 1), Demonstration of the inequitable distribution of resources in which students are divided proportionately to the world's population among continents which are drawn on the floor. The teacher then distributes Tootsie Rolls to simulate the distribution of resources among the continents. Finally, students are shifted to simulate the shift in population and resource availability that will occur in 2000. The data for this exercise should be updated to reflect more modern information.

Technological Answers, (OTERO), Reading and discussion questions that familiarize the student with technical solutions to food distribution problems. Students evaluate the solutions presented and discuss roadblocks to implementation.

The Third World in My Home, (FRANZ), Illustration and activities designed to make student more aware of their dependence on *developing* countries as well as relationships between our high standard of living and their poverty.

Triage, (OTERO), Simulation of triage following a plane crash.

Water is Precious, (WRIGHT), Home extension activity in which students are allocated 6 litres of water for use in 24 hours, and they record usage.

Who Needs Enemies? A World Hunger Game, (JGAMES), Simulation game in which students learn about the actors and interrelationships in world hunger. Mal-distribution of the world food supply is clear throughout the game. This game promotes the concept that world hunger can be ended with group action. Players pursue policies characteristic of real world policies while attempting to advance their own interests. Renga is the hypothetical country that symbolizes the *developing* world in this game. Multinational corporations, relief agencies, the world press, citizens of the *developed* world, Renga's peasantry and Renga's government are roles played by student groups. The goal of the game is to raise the level of caloric intake in Renga and avert *Ultimate Catastrophe*. Game is played with chance cards, playing cards and disaster cards. You may want to update information on a few of the cards.

CATEGORY 6: ENVIRONMENT/BIOSPHERE

Avoiding the Tragedy of the Commons, (MERSHON), Scenario and worksheet that analyze the methods five regimes would take in managing the commons. Students evaluate the effectiveness of those methods. Questions for discussion lead directly to a correlation between the scenario and modern commons problems, (i.e., ozone, oil spills, etc.), relating them to the importance of profit motive and personal responsibility.

Build a Better Smokestack, (ZERO), Research and role play activity in which students analyze data to predict the origins and effects of acid rain in a hypothetical situation. As an extension activity, students are asked to test local lakes for pH levels and are encouraged to write letters to government officials regarding acid rain.

Bye Bye Birdie, (ZERO), Research and value prioritizing activity in which students must research and advocate the preservation of an endangered species. At the conclusion of presentation of arguments favoring the preservation of certain species, the group must decide which one is the most valuable. Although the activity is a good one for addressing the issue of endangered species, I recommend including a reading from Our Common Future, chapter 6, *Species and the Ecosystem: Resources for Development,* as an extension activity to encourage an understanding of the alternatives to having to choose between species for survival.

Control of the Seas, (OTERO 1), Simulation/role play activity in which students represent different imaginary countries with varying interests in controlling the *Sea of Plenty*. Six country profiles are available, and students must consider their objectives and present their interests to an international meeting. Through negotiations with other countries, an agreement is reached and students are asked to compare the outcome with reality.

The Demise of the English Commons System: Analyzing Historical Alternatives, (MERSHON), Simulation game which examines the management of the commons in an historical context. Presents five strategies for avoiding tragedy. Students see the effects of mismanagement. Ideal for sustainable development and relating it to the enclosure movement in preindustrial England.

Development and Environmental Problems in the Sahel, (FRANZ), Reading and writing assignment illustrating the effects of poverty on the ecosystem. Encourages students to consider options for sustainable development.

Earth: An Endangered Species?, (HURSH), Atlas worksheet and short research activity in which the student identifies environmental problems, traces their social, political and economic causes and examines consequences of the problems on regions and the globe. Recommended for an introduction to the state of the planet.

Earth's Disappearing Tropical Forests: The Basic Facts, (FRANZ), Reading and questions for discussion that illustrate the reasons for, and effects of, rain forest destruction. Students are asked to draw a parallel to similar destruction in development of the U.S. Raises the issue of management of the commons.

Identifying and Applying Values to Environmental Issues, (MERSHON 1), Questionnaire used in class to address the origin and current state of values inherent in decisions about the environment. The idea of ecosystem is emphasized. Issues such as economic value, environmental stability and international cooperation are addressed. NOTE: The introductory material makes this lesson appropriate for use in a unit about Judeo-Christian beliefs or in a unit comparing Asian and Western philosophies.

Introducing the Systems Concept: The Environment and Other Global Systems, (MERSHON 2), Reading and simulation *Tragedy of the Commons* revamped for a focus on the ecosystem. Systems concept stressed with excellent diagrams of the carbon cycle, global coffee trade and illustration of open and closed systems. This activity is designed for use in a Geography or Global Studies approach.

Nuts Game, (GORE), Simulation game of competitive harvesting and renewable resources which helps students understand the difficulties associated with voluntary conservation, the tragedy of the commons, and competition. Students play this two-part game by freely taking as many nuts as they can each grab in 15 seconds. During round two, students play with a change of rules in which the number of nuts remaining in the bowl after the 15 second interval doubles. Could be used for distribution of resources, too.

Ocean Boundaries and the Resources of the Sea, (MERSHON 2), Simulation activity in which students role play a Law of the Sea Conference. Lesson is very simple, but provides an understanding of some of the issues surrounding ocean management. Can easily be extended to cover issues of fisheries management, ocean dumping, and the role of *developing* nations. Introduction to the teacher cites a connection to the original idea for freedom of the seas to a treatise by Dutchman in 1609. May be a good historic post hole.

The Other Energy Crisis, (INTERCOM 3), Reading and map activity in which the student is introduced to desertification through map interpretation and debriefing questions.

Photo Forest, (ZERO), Satellite photos, questions for interpretation and reading present students with evidence of deforestation. An extension activity encourages students to recognize the effects of development in their area on soil erosion.

Role Play Assignments, (FRANZ), Role play activity that places student in the position of advocating a position concerning the development of Borneo's rain forest for agriculture. Roles include: Landless Farmer, Multinational Corporation, Environmental Group, Aboriginal People.

CATEGORY 7: ENERGY

BTUs = Better Timber Uses, (ZERO), Research activity in which students investigate and compare the energy efficiency of firewood, animal dung, kerosene and natural gas. Students are encouraged to consider the cultural relativity of certain types of energy sources. Students are also asked to consider the uses of wood in *developed* and *developing* countries. This activity can also be used to explore reasons for deforestation.

Change Your Lifestyle, (GORE), Class advocacy activity in which students choose a way in which they will all work to conserve energy for a two-week period. Helps students internalize the change in attitude necessary for energy conservation and to understand the problems and challenges of a conservation mode.

Creating an Energy Platform, (GORE), Group activity in which students write a party platform and speech for energy issues. Students are evaluated on the appeal of their speech to many groups of voters while addressing as many energy issues as possible. A great way to encourage an appreciation for the intricacies of policy making in a democracy.

A Decision Making Simulation, (INTERCOM 3), Role play/simulation/research activity in which the students will research energy issues from the perspective of their assigned role. They will work with a group to draw up a position paper for presentation to the President of the U.S. Specific questions are assigned in order to direct student research. Eight role descriptions are available for this activity.

Energy Alternatives and the Environment, (GORE), Worksheet and research activity in which students are asked to record the impact of energy alternatives on air pollution, land use, water pollution, and disasters.

Energy Quickies, (GORE), Five motivating activities as introduction to energy awareness. Included are taking pictures of energy, calculating how many lights are used in the students' town, writing a one act play entitled *The Year the Lights Went Out,* taping energy sounds, listing nonelectrical alternatives.

Energy Transitions and Social Change, (MERSHON 3), Reading and charts for group discussion introduce the concept of energy transition and trace energy transitions through history. Reading encourages an understanding of the cause-effect nature of transitions. Charts require the student to consider relationship between energy sources and changes in society. Options (coal, solar, nuclear) for the current transition are compared in terms of the social changes they may bring. Opportunity to introduce renewable energy sources in an historical context.

Exponential Growth Calculator Activities, (GORE), Skills activities using calculators in which students calculate exponential growth in population and energy consumption. Worksheets available encourage students to work through calculations and then answer questions regarding the consequences of growth. Key concepts include doubling time and zero population growth. Can also be used in population study.

How Things Connect, (GORE), Map and newspaper activity in which students survey the media for news about energy issues. The location of the stories is pinpointed on a world map, and students brainstorm to determine if that story will have consequences beyond its place of origin. Stresses the extent of interdependence between energy issues and global problems.

Looking Forward: It's the Year 2000, (GORE), Brainstorming activity in which students are asked to place themselves in a future situation and to reflect on what actions could have been taken to avoid the crisis they find themselves in. Scenarios should be extended to include the ozone problem and acid rain.

Map Directory of Renewable Resources, (GORE), Maps of N. American renewable resources that can be used to stimulate a lesson on available resources for sustainable development. Students are asked to determine which renewable resources are available to their locale. May want to use these maps for more extensive lesson on renewable energy.

Mapping Energy, (GORE), Mapping activities (11) that can be used to illustrate sources, consumption and development of energy globally. These activities can be done in small groups and provide the necessary data for a class discussion of sustainable development of energy.

New Clear Reactions, (ZERO), Research and board game activity in which students test their knowledge of nuclear energy. Students make up their own questions that will be used in playing the game. The game board and playing instructions are provided. Students may play as individuals or as teams in answering questions as they progress around the game board. NOTE: The quality of the game is only as high as the quality of the questions students produce through their own research. This is an excellent motivator and evaluator for a nuclear energy lesson.

One Thing Leads to Another, (GORE), Diagram activity using a futures wheel to illustrate the interrelationship of energy and environmental issues. May want to expand the examples given and extend the activity by having students draw their own futures wheel.

Problems, Problems, (GORE), Group chart activity in which students are asked to note consequences of solutions to energy problems.

Resource Depletion, (GORE), Simulation activity presents resource depletion curves through a hands-on modeling activity. Students mine classroom *oil reserves* during 15 second intervals, each interval representing one year. Demand rises exponentially and more and more people are permitted to mine during the 15 second interval. Oil spills are taxed and miners go out of business as supply drops and prices rise. Students graph their oil production and debrief by comparing their findings to U.S. oil production figures. CAUTION: This is a fairly complex activity that requires a very cooperative class and a good deal of teacher prep time.

Solar and Other Kinds of Power, (GORE), Short readings about 16 alternatives to gas and oil energy. Activity includes a categorization of energy sources into *renewable* and *non-renewable* and a role-play in which they must choose four sources of power in which to invest $1000.

Survey of Community Attitudes, (GORE), Questionnaire activity in which students poll people in their community about energy conservation attitudes and compare results to a national poll. May want to modify the survey.

What Are The Power Users?, (GORE), Introductory activity in which students classify items according to the kind of energy they use as a method for determining power consumption patterns. Can extend this activity by combining it with *Energy Using Gadgets,* which is another activity in this resource in which students are asked to substitute human energy for gadgets. Helps students understand the fact that the U.S. uses 40% of the world's energy.

Who's Got the Batteries?, (JOHNSON), Simulation of interdependence and energy resources. Students are divided into five groups, each group holding a bag containing five identical parts to five flashlights. Their task is to make a system that works. Debriefing questions get to the heart of interdependence, equity, and distribution of energy resources.

CATEGORY 8: EQUITY/SOCIAL GROUPINGS

Apartness, (HUTSON), Simulation game and reading with questions that introduce the system of apartheid. May need to be updated, but the activity and reading are very descriptive of the inequity. May want to extend questions to encourage a discussion about the disadvantages of this system even to the minority rule.

Call Them as You See Them, (FENTON), Worksheet activity in which students must imagine how the wealthy and poor view each other. Students select from a list of adjectives to describe a coffee worker in El Salvador from

the perspective of a plantation owner there, and then repeat the process from the coffee worker's perspective. Debriefing questions examine the difference between misconceptions and true descriptions.

Central American Power Play, (SANBORN), Role-play activity in which students imagine a confrontation between the powerful and powerless in Central America. Students gather information on the social structure of Central America and negotiate a compromise between major actors in a crisis.

Constitutional Convention: Writing Them Right, (LAMY), Simulation in which students represent different countries, and, after researching the issues and problems facing that country, must rewrite the constitution. Students are introduced to the form, limitations and compromises inherent in constitutions.

Corporate Cultures, (SANBORN), Readings and discussion questions to define *corporate culture* and compare Japanese to American corporate culture.

Disaster on Mount St. Elias, (HUTSON), Scenario and discussion questions that can be used to discuss the *fairness* of resource distribution models. Students are asked to measure effectiveness of each model with its fairness.

Folk Tales from Around the World, (HUTSON), Folk tale readings from India, Korea, Burma and Mexico that encourage an understanding of the universal theme of fairness. The questions are good for addressing only that issue, but the folk tales are perfect for extending the lesson for understanding the connection between equity and sustainable development. With a little work on those questions, this could be a great vehicle!

Free a Woman, Free a Nation, (MILLER), Readings about childbearing attitudes in India, Nigeria and China with discussion questions that encourage students to examine the relationship between opportunities, fertility rate, and attitudes about childbearing. Can be used when discussing the link between development, equity and human resources.

Global Human Rights and Wrongs, (HURSH), Atlas worksheet activity in which students interpret map information to draw conclusions about human rights. Encourages further research.

Human Rights on Trial, (HURSH), Atlas motivating activity which encourages students to gather data to build a case against specific nations that violate human rights. Good motivator for a research project and mock trial.

Japanese Sociograms, (SANBORN), Diagram, reading and discussion activity in which students evaluate the impact of family structure in Japan on other aspects of that culture. Good suggestions for follow-up activities.

Marriage: A Case of Indian Decision Making, (ASIA SOCIETY), Student readings and questions including readings from personal column ads for marriage. Encourages student articulation of cultural values in India and the United States.

Varna/Jati: Identity with the Group, (ASIA SOCIETY), Student readings and questions regarding social class and the impact of tradition and religion on modern Indian society.

Women and Power in India, Theme #4 Activity 5, (SCHWARTZ), Group activity designed to raise issues of role positions of men and women as well as the concept of power. India is used in this data analysis activity as an example of changing role positions.

Women in a Hungry World, (RICHARDSON), Three Part Packet of Readings and Discussion Questions.

1. **What's Happening to Women**—Readings of interviews with women in *developing* countries and readings on women and development. Topics include: inequality of work roles, adverse impact of development on women.

2. **Population: What's Good for Women is Good for the World**—Readings on what population growth means to women. Topics include: importance of childbearing, how employment and education affect population, how to make possible a choice for small families.

3. **Who Can Do What? Solutions and Action Suggestions**—Readings about what women, *developing* countries, the U.S., and the individual can do for greater equality of women.

Origins of the Attitudes Toward Women, Theme #4 Activity 1, (SCHWARTZ), Reading and discussion activity in which students are directed to read references to women in Genesis and the Koran to trace origins of negative female images.

Role of Women, Theme #4 Activity 4, (SCHWARTZ), Two part activity using magazine photos of international women to represent their role in society, analysis of data concerning the status of women in those countries and follow-up activity including case studies of women in India and Latin America with discussion questions.

Serfdom, (FENTON), Simulation game in which a hierarchical society of leaders, intermediaries, and workers is established. During the simulation, players act according to their roles, but following the game, students are

questioned about the values embodied in a hierarchy and discuss alternatives to it.

Spaceship Survival, (FENTON), Group consensus activity in which students role-play a crew on a spaceship who must decide which 10 people on earth they will save. A worksheet is provided which lists nationalities and occupations from which they must choose. Students may use the same nationality as often as they wish, but they must choose 10 different people according to their profession. Provides an opportunity to get to bias and prejudice about other people.

Starpower, (FENTON), Simulation game which illustrates the dynamics of power in a competitively structured society. NOTE: Fenton provides only a brief description of this game which is inadequate for use in the classroom. The simulation is available from Social Studies School Service, P.O. Box 802, Culver City, CA 90232-0802.

Strangers in Their Own Country, (BIGELOW), This is a complete curriculum guide on South Africa in which every lesson is appropriate for sustainable development. Therefore, the titles of all of the lessons with a brief description of each are listed below. Bigelow makes suggestions for lesson selections for a one, two or three week curriculum on South Africa. It is up to the individual to make choices.

1. **South Africa M&M Simulation**—Motivating activity which illustrates the unequal distribution of resources in South Africa.

2. **Facts on South Africa**—Fact sheet and worksheet for interpretation. Presents realities of life in South Africa.

3. **Last Grave at Dimbaza**—Film, quotation sheet, reading which presents the living conditions of blacks and whites in South Africa.

4. **The Homelands: Point/Counterpoint**—Reading and fact sheet used to direct students to write an editorial in opposition to multinational development strategy. Students draw from information gained from lesson #3.

5. **Laws of South Africa**—Readings and situations worksheet introduce the laws that protect the system of apartheid. Students apply laws to situations presented in the worksheet to recognize the effects of those laws.

6. **The Pass Law and the Threefold Cord**—Excerpt readings from books about South Africa to encourage an understanding of the effects of the pass laws. Excellent questions for discussion.

7. **South African Story Writing**—Follow-up to lesson #6 in which students write creatively about the effects of apartheid on South Africans.

8. **Afrikaner Experience (or the White Laager)**—Film, timeline, questions and quotes present the historical origins of South Africa and encourage viewers to consider prospects for peaceful change in light of that experience.

9. **Generations of Resistance**—Film and timeline to present the history of the struggle for black rights in South Africa. Students consider alternative strategies for change. A concluding writing assignment encourages them to consider nonviolent versus violent responses to apartheid.

10. **Nelson Mandela: The Rivonia Trial Speech to the Court**—Reading with supplementary vocabulary list and questions to help students understand the reasons for violence in response to apartheid. Encourages an understanding of the relationship between violence and social change.

11. **Black Unions Struggle for Justice**—Reading of the Freedom Charter with role-play and worksheets which encourage students to evaluate black unions and the role of collective decision making. Excellent questions to lead students through strike role-play and debriefing in class.

12. **South Africa in the Region**—Research activity with research guides provided for Zimbabwe, Mozambique, Namibia and Angola. This activity is designed to help students understand South Africa's relationship to its neighbors. Extension activities, such as planning a peace conference or economic summit are suggested.

13. **Learning to Resist**—Reading and questions for homework and class discussion about growing up in Namibia. Teachers may use background notes on Namibia or the research done by students in lesson #12 to supplement students' knowledge about Namibia.

14. **Debate: Should U.S. Corporations Invest in South Africa?**—Debate activity includes background information about U.S. invest-

ment in South Africa and the points of view of U.S. banks and corporations and the A.N.C. (African National Congress) to help students prepare for debate. Concluding activity is one in which students must write a letter to a friend advising the friend on the role of U.S. investment in South Africa. Very well planned activity.

15. **Letters on South Africa**—Letter writing activity in which students must write a letter to people and organizations who deal directly with South Africa. The activity is done individually but then switches to a group process for editing and review. Addresses and clear instructions for the students are provided.

16. **Final Project**—Creative project in which students express their feelings and understandings about South Africa by composing poetry, plays, songs, graphic arts, dance, news articles or short story writing.

CATEGORY 9: INTERNATIONAL ECONOMY

The African Connection: A Fair Deal?, (HURSH), Atlas worksheet activity in which students list the products of Africa and identify their trade relationship with industrialized countries. Encourages understanding of the impact of neocolonialism on Africa.

The Big Time, Theme #5 Activity 2, (SCHWARTZ), Activity and hand-out illustrates the power and financial size of multinational corporations when compared to most governments. Encourages discussion of the role of government in regulating corporations.

Europe's Economy in an Age of Transition: I. The Medieval Economy, (JCEE), Readings and questions about the characteristics of medieval society and features of the economic system. Students will classify the economy as a command or traditional system through readings about the manor and guild. Students will also recognize the impact of societal values on the establishment of the system through a reading of St. Thomas Aquinas.

Europe's Economy in an Age of Transition: II. The Emerging Market Economy, (JCEE), Readings and questions to be used in conjunction with part I (see above). This exercise presents social, economic, political and theological reasons for the shift to a market economy.

The Family Jewels, (KORANSKI), Listing activity in which students recognize the difference between wants and needs. Students identify five of their most important possessions and compare those items to their peers. In the next

step, they consider their neighbor's possessions and categorize twenty items according to wants and needs. Finally, they are shown pictures of the interiors of homes from other cultures and draw conclusions about wants and needs of other cultures. Through an extension activity, students can explore the impact of climate, living conditions and availability of goods on the possessions needed in other cultures.

The Game of Scarcity and Allocation, (JCEE), Simulation game in which students take the role of castaways on a deserted island. Their task is to make use of resources available to their greatest benefit. To do this, students must make choices about what, how much and when to produce things to meet their needs and wants. This game seems very complex, but perhaps once the students work through a round it will become easier. NOTE: The teacher is required to purchase fact sheets not available in this resource book.

Global Production Systems, (INTERCOM), Map, readings, group activity and role-play designed to introduce concept of multinational corporation and its role in the global production system and the building of economic interdependence. Students identify reasons for locating operations internationally, understand the factors considered when locating production facilities, and finally, use what they have learned to engage in a consensus decision making activity in order to choose a location for a factory.

Global Products, (INTERCOM), Readings and questions to present the concept of global production. Breaks down the *us/them* attitudes that inspire protectionism. Funny article by Art Buchwald really hits home.

The Importance of Imports, (KORANSKI), Role-play activity in which students must advise the President of either the U.S. or Venezuela on imposing import restrictions. This activity provides an opportunity for the student to weigh the benefits and disadvantages of imports and restrictions for wealthy and poorer nations. Students will notice similarities and differences in the dilemmas facing both countries.

Inflation—World Problem?, (KORANSKI), Map and worksheet activity in which students identify inflation rates in 20 countries. Students are encouraged to compare these rates to U.S. inflation and to imagine what life would be like in a place where inflation is 140%. May need to extend this lesson.

International Trade Lifestyles, (WENTWORTH), Activity in which information about trade is sorted and organized. Students compile lists of items from their homes that have been imported. In class, these lists are organized so that students can recognize trade patterns and formulate generalizations about U.S. trade with other countries and our interdependence.

Interpreting Trade Data, (WENTWORTH), Worksheets in which students interpret graphs and charts in order to make inferences about the importance of trade to the U.S.

Introduction to International Trade, (INTERCOM), Reading and survey assignment designed to illustrate student's connection to international trade. Basic understanding of terms such as imports, exports, goods and services are explained through the student's environment.

Investigating International Trade: Beginning the Search, (WENTWORTH), Group brainstorming activity in which students list imports and exports from their region. Items are categorized into types of goods and sources of imports. Through this exercise students clarify the terms *import* and *export*. By extending the lesson through the homework assignment and the next lesson in this book (see *International Trade Lifestyles* above), students will recognize the effect of trade on their lifestyles.

Jobs and International Trade, (INTERCOM), Simulation activity and handout that explain the mechanics of international trade. Students are first asked to recognize the impact of international trade on consumption and job opportunities. During the simulation, students work in small groups and must work through the process of exporting certain goods to Japan.

Labor-Intensive Systems and Capital-Intensive Systems, (KORANSKI), Reading and worksheet that introduce the concept of labor or capital-intensive economic systems by identifying characteristics, advantages and disadvantages of each, and research assignment. Students research a particular country's economic indicators and predict the impact of hypothetical events on that country's economy.

Laws Influence Trade, (WENTWORTH), Simulation game which illustrates the effects of laws on trading. This game also illustrates relative opportunity costs and incentives to trade. Students experience three rounds of trading for puzzle pieces so that they can complete shapes. During the first round they are permitted to make only one trade and all pieces have a set value for every player. In the second round students are permitted to make as many trades as possible within a given time, thereby encouraging more complex trade agreements. During round three, students are assigned different values for shapes they can make with pieces, thereby making the relative value and costs of pieces different for each student. Excellent and simple simulation.

Natural Resources & Dependence on the World Economy: Latin America, (MERSHON 2), Reading and small group discussion questions regarding forms of dependence. Careful instructions to the teacher on how to differentiate among dependence, interdependence, and independence as well as

types of economic dependence such as trade, commodity, aid and investment dependence. Students are asked to consider ways of breaking dependence and also to compare the original success of the oil cartel to the failure of the coffee cartel.

Ripples, (WENTWORTH), Worksheets for small group activity in which students formulate an economic forecast. The worksheet acts as a tool for predicting the impact of certain trade restrictions on prices and employment. Through debriefing questions, students are asked to consider the impact of economic decisions on other economic and social conditions.

Third World Debt Issues, (FRANZ), Reading questions and political cartoons present the issue of the debt dilemma. Students are asked to consider the effects of debt on the global economy and the economies of debtor nations. Opportunity to discuss options for payment and effect on sustainable development.

Trade Around the World, (WENTWORTH), Skills activity including a chart and worksheet in which students interpret world trade statistics to describe trade patterns and contributions of many countries to the world economy. They will recognize how resource distribution, technology, and cultural and political differences influence trade patterns in a global economy.

Trade Barriers, (WENTWORTH), Reading, skills worksheet, and debate which can be used to describe types of trade barriers, determine their effects on world trade and debate the validity of imposing trade barriers as an alternative to protect a nation or industry from rising imports. CAUTION: The worksheet activity seems very complex, although probably excellent for illustrating the effects of trade barriers.

Trade and Specialization, (WENTWORTH), Trading game that depicts the concept of comparative advantage. Students are divided into three groups - farmers, tailors and builders - who have an option to produce all of their basic needs independently or to specialize and trade. Students recognize the impact of comparative advantage when their opportunity costs for production are low.

Traditional, Market, and Command Economic Systems, (JCEE), Reading and worksheet to help students collect, record and analyze data about three types of economic systems. By analyzing these data, students can infer economic goals of particular cultures and the impact of political and social development on these economies. The examples presented in the reading are of a traditional Eskimo economy, an imaginary society that is organized around a market economy, and the Soviet command economy. Can extend debriefing questions to address sustainable development.

Understanding Protectionism, (INTERCOM), Reading and questions for discussion and role play which present the issue of protectionism, its impact on American industry, and various protectionist measures. Students evaluate protectionism and free trade. Good introduction to protectionism, but needs something to illustrate its harmful effects on sustainable development.

United States World Trade Activity, (WENTWORTH), Skills activity in which students interpret statistical information to describe U.S. trade with respect to the types of goods traded and major trading partners. Students are encouraged to recognize the effects of resource distribution, transportation, and political and social constraints on trading patterns. Very good hypothetical events presented at the end of the lesson that can be used to evaluate the students' understanding of trade patterns.

U.S. Foreign Trade Issues, (FRANZ), Reading (newspaper article) and questions raise the issue of market competition between *developed* and *developing* economies (Brazil and U.S.). Issues of interdependence and sustainable development versus national interests. May want to expand the questions at the end to incorporate sustainable development.

U.S. International Trade, (INTERCOM), Skills activities involving graph reading and interpretation. The focus of this lesson is the character of U.S. international trade and an understanding of the balance of trade. The final part of the lesson presents a study of U.S.-Japan trade as an example of bilateral trade and interdependence. The issue of protectionism can be addressed as an extension. This lesson would fit into a lesson on the Meiji period in Japan.

Why Do People Trade?, (WENTWORTH), Trading activity in which students experience incentives to trade, anticipate costs and benefits of trade, and realize consequences of trade.

Why People and Nations Trade, (WENTWORTH), Reading and worksheet activity in which students understand the concept of comparative advantage as a way of learning why nations specialize in production of certain goods.

CATEGORY 10: POPULATION

In the Words of Third World Women, (FRANZ), Reading and written assignment using statements by women about attitudes towards having and raising children.

Population Growth: The Basic Facts, (FRANZ), Charts, graphs, reading and questions designed to explain present facts of population growth in industrialized and *developing* countries. Presents explanation for the differences

and uses China as an example of an official population growth plan. Questions lead students to evaluate the effects of population growth on development. A parallel is drawn to pre-industrial Europe and U.S.

Population Growth Rate—Poster Kit Number 2, (WB 2), Skills activities including vocabulary, maps, charts, photographs, tables and discussion questions that explain the relationship between population growth and development.

The Stork and the Grim Reaper, (OTERO 1), Demonstration activity in which students can visualize the relationship between death and birth rates as factors in population growth. Using a container for water and two student volunteers, the teacher can illustrate the effects of a higher birth rate than death rate. Great visual way of showing the finity of earth.

Who Is Growing? Who Is Not?, (ERC), Worksheets and demonstration exercises explain the concepts of exponential growth, doubling time, median numbers, and the impact of birth and death rates on population growth. Excellent graphs and charts which illustrate levels of population growth and growth regions. Debriefing questions encourage an understanding of the strain on resources caused by population growth. Simple demonstrative exercises that illustrate points made in the lesson. Historical hook is made in this lesson through a chart of population growth through history.

CATEGORY 11: SECURITY

Developing Individual Foreign Policies: Ways to Obtain Peace, (MERSHON), Reading about *developing* foreign policy and a poll, *What is Needed to Obtain Peace*, where students can evaluate their own foreign policy and compare it to responses from people in 9 other countries. Good way to introduce solutions to global conflicts.

Letter to Pepe, (FENTON), Group consensus writing activity in which students must respond to a letter from a friend in Latin America who has decided to join the FLN. Students must decide how they feel about the pace of social change and violence as an alternative.

Mapping the Effects of Nuclear War, (MERSHON 1), Small group mapping activity in which the student maps the fallout of a nuclear explosion and traces its effects on their community. The scenario presented should be changed and the activity extended to include the global effects of nuclear winter.

The Nuclear Arms Race: The Logic of the Absurd, (MERSHON 1), A simulation activity in which students understand the reasons for the arms race,

trends in arms proliferation, alternatives, and ways technology, the economy and domestic politics affect the arms race. This activity is basically a good way to help students internalize the psychology of the arms race. However, for our purpose, it needs to be updated and the role of the arms race in *developing* countries could easily be expanded. Suggested use in a unit on the Cold War.

Resources and Arms, (INTERCOM 2), Simulation game in which students recognize the costs of war in terms of resources. Students begin the game with a number of chips and must commit chips to resources and arms. The success of attack rounds are determined by the number of chips in the arms pile, but the success of the game is determined by the number of chips in the resource pile. Good and simple motivator to the role of conflict in sustainable development.

The War Game, (FENTON), Simulation game about international conflict in which two teams fight (arm wrestle and stare down) for a goal. Students role-play military commanders, negotiators, religious and moral leaders. The lesson is designed to help students understand decision making in conflict situations. CAUTION: This game requires a large group of students and three leaders. It requires debriefing questions for use with sustainable development.

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I Imitate Monet

Guido Martin Sica
Age 12
Argentina

Chapter 7

Courses
Introduction

The three course outlines that follow represent different approaches to infusing the concept of sustainable development within traditional courses of world history, world cultures and global studies. In the first two outlines which were written during the field-testing phase of this project, the concept of sustainable development is explicitly noted. In the third, which was originally developed a decade ago, the concept of sustainable development has been incorporated within the issue topics reflected in the major units of study. The variety in approach comes in part from the fact that each course has been developed by a different school or school system.

World History and Sustainable Development

In the following outline*, the "History Units" follow a traditional chronological outline from ancient civilizations to the contemporary world. "S.D. Element" refers to one of the three major elements of sustainable development, namely, environment, development or equity. The "Topics" are taken from the vertical column of the *Analytical Framework for Sustainable Development* in Chapter 5.

History Unit:	**Geography and Emerging Civilizations**
S.D.† Element:	**Environment**
Topic:	Human Environment Interaction
Objective:	To compare and contrast ancient and contemporary views about the environment through case studies.
History Unit:	**Classical Governments and Philosophies**
S.D. Element:	**Equity**
Topics:	Power and Government Systems
Objective:	To analyze the impact of political ideology on power and social justice within societies.
History Unit:	**History of World Religions**
S.D. Element:	**Development and Equity**
Topics:	Belief Systems, Religion and Values
Objective:	To recognize the role of belief systems in developing social, cultural, political and economic structures.
History Unit:	**Feudalism to the Central State**
S.D. Element:	**Equity and Development**
Topics:	Power, Government Systems, Social Groupings
Objective:	To trace the emergence of the contemporary view of the role of the individual and the state and natural rights.
History Unit:	**Science, Technology, and Industrialization**
S.D. Element:	**Environment and Development**
Topics:	Production and Manufacturing, Division of Labor, Tools, Technology and Research
Objective:	To evaluate the effects of industrialization, science and technology on environment and societies.

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* Developed By Linda Whalen Murchio, Madison Central High School,Old Bridge, NJ.
† Sustainable Development.

History Unit:	**Nationalism, Imperialism and Development**
S.D. Element:	**Development and Equity**
Topics:	Physical Quality of Life, Power, Belief Systems
Objective:	To recognize and evaluate the impact of colonialism on global development.
History Unit:	**Global Conflict**
S.D. Element:	**Development and Environment**
Topics:	Security and Conflict/Resolution
Objective:	To examine the effects of conflict and security problems on the development of societies and on the natural environment.
History Unit:	**Decolonization and Interdependence**
S.D. Element:	**Development**
Topics:	Problem Solving Approaches
Objective:	To evaluate the problems faced by newly independent nations and the various ways in which they are attempting to resolve them.
History Unit:	**Global Systems**
S.D. Element:	**Development and Equity**
Topics:	Systems of Trade and Exchange, Transportation Systems
Objective:	To recognize the interdependence of nations in meeting the basic needs of their societies.

World Cultures

The World Cultures course* aims to teach about the human experience from a global perspective. To do this, we shall discuss the history of various societies in the Americas, Europe, Asia and Africa. Along the way, we shall give major attention to all areas studied.

There are three especially important ideas in this course. One is the idea that all societies have something of value to contribute to the human condition. The second is that we will seek to avoid judging one society by the standards of another, but will utilize multiple perspectives when having to make such judgments. The third is the idea that in order to endure, a society must meet

---

* This course outline is provided by Madeline Landau and John Raby, History Department, The Pingry School, Martinsville, NJ.

the needs of both its present and future generations. *The central question of the course, then, is this: what forces enable societies to endure and to contribute to the human experience?*

ORGANIZING QUESTIONS WE SHALL BE ASKING ALL YEAR

1. What does it mean to be civilized?
2. What ethics and values define people as human beings?
3. How are people different from other forms of life?
4. What is the nature of progress?
5. How do people define the good life?
6. How do people define human needs?
7. How do people define human rights?
8. What responsibility do societies have to their future?
9. How do people define the notion of community?

COURSE OBJECTIVES

By the end of the year, students should be able to:

1. Define the term "cultural assumption" and give examples of cultural assumptions.
2. Define the term "sustainable development" and explain how it works.
3. Define the term "interdependence" and give examples of how it works.
4. Show examples of cultural bias in map making.
5. Identify and locate the major continents, oceans and physical features of the world.
6. Tell the size of the world's population. Identify, locate and tell the population of the world's ten most populous countries.
7. Analyze the history of various societies in these areas of the world as case studies in sustainable development: Western Europe, Asia, the Islamic world, the USSR, North America, Latin America and Africa.
8. Think critically.
9. Use history to understand human problems and achievements.

COURSE CONTENT

1. The concepts of cultural assumptions and sustainable development as an analytical framework for the course

2. Some basic global geography—location of continents, oceans, major land features, major concentrations of world population; discussion of cultural bias in map making

3. The concept of interdependence—ecological, social, political, economic; 15th-16th century Chinese and European discovery and expansion as cases in point—follow-up: reports from newspaper articles illustrating contemporary interdependence

4. The history of various societies selected from the list below as cases in sustainable development:

   A. Europe

      1. Middle Ages
      2. Renaissance
      3. Reformation
      4. Scientific Revolution
      5. Industrial Revolution
      6. Political Revolution-England (1600s), France (1789), Russia (1917), Eastern Europe (1989)

   B. Major Asian Societies—India, China, Japan

      1. Ancient Roots—political, economic, cultural
      2. Internal Developments—political, economic, cultural
      3. Interactions with other areas of the world, with emphasis on non-Western areas—political, economic, cultural

   C. The Islamic World

      1. Ancient Roots—political, economic, cultural
      2. Internal Developments—political, economic, cultural
      3. Interactions with other areas of the world, with emphasis on non-Western areas—political, economic, cultural

   D. Latin America

      1. Ancient Roots—political, economic, cultural
      2. Internal Developments—political, economic, cultural
      3. Interactions with other areas of the world—political, economic, cultural

E. Africa

1. Ancient Egypt
2. The Sahelian empires
3. Slavery
4. South Africa

5. Current Global Issues—what do we need for future sustainable development?

A. Arms race

B. Population

C. Environment

D. Resource use

E. Technological change

F. Human rights, political and economic

Global Studies

The course* will revolve around themes/concepts which will be systematically investigated through an inquiry approach to develop numerous, alternative conclusions and solutions to common problems. Case studies of specific areas and cultures will be utilized to illustrate and complement the inquiry approach.

SUGGESTED UNITS OF STUDY

1. Introduction to Global Studies—*factors of*

A. Basic Human Needs
B. 3rd World Situations
C. Comparisons of Societies
D. Localizing Global Interests

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* Courtesy of Thomas Crop, Bridgewater-Raritan School District, NJ.

2. Environment—*factors of*
    - A. Planet Earth
    - B. *Problems of*
        - Habitat Destruction
        - Pollution
        - Conservation/Preservation
        - Energy

3. Economic Development—*factors of*
    - A. Geographic Limitations
    - B. Resource Base
    - C. Population Growth
    - D. Food Production/Consumption

4. Human Development—*factors of*
    - A. Disease
    - B. Education
    - C. Religious/Philosophical Determinants of Society
    - D. Alteration of Traditional Roles
    - E. Human Rights

5. Global Security—*factors of*
    - A. National Interests
    - B. Concept of War
    - C. Nuclear Warfare
    - D. Alternatives

6. Global Legal System—*factors of*
    - A. Basis of Law
    - B. International Law
    - C. International Organizations
    - D. Extra National Influences

7. Alternative Futures—*factors of*
    - A. Third Wave
    - B. Forecasting 2020 A.D.
    - C. Brainstorming 2030 A.D.
    - D. Spaceship Earth

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Fishermen of Sri Lanka

Sanjeeva Wijeysakere
Age 7
Sri Lanka

Chapter 8

Resources
Introduction

Four types of supplementary resources comprise this chapter.

- First are audiovisuals (page 8-2).
- Second, the bibliography contains books and periodicals that are not cited in chapters 6 and 9 (page 8-13).
- Third, free publications are included in a separate section to make ordering them simple (page 8-19).
- Fourth, a selected list of organizations concludes the chapter (page 8-24).

Audiovisuals for Sustainable Development

Audiovisual resources on sustainable development themes are being produced in abundance and on relatively inexpensive videotape format. However, it is extremely difficult to keep up with the influx. We encourage you to send your name and address to the sources listed at the end of this section so you can receive information on their latest releases.

This subchapter is divided into three sections. First is a core selection of videos that reflect an overview of sustainable development and some of its central issues. The second section contains videos organized topically. The third section focuses on Africa because of the number of African videos with which our team members were familiar. Within the annotations, the names of countries and specific issues have been printed in **bold typeface** if those topics are not self-evident from the titles in order to help readers locate particular interests.

This listing is by no means an exhaustive or comprehensive treatment of sustainable development audiovisual resources. We have included only those videos that at least one member of our Development Education Team or our research assistant was able to preview. Thus we were limited to videos that team members already knew or that distributors would provide for us without charge to preview. One result of this fact is that the following selection of videos lacks balance in terms of world regions or specific issues.

Three other criteria that influenced our selection process were the appeal for high school students, the ability to show the video within a high school class period, and currency of date. We tended to omit videos produced before 1985.

Where possible, we have identified both a New Jersey and a national distribution source. Their addresses are found at the end of this section where they are listed alphabetically according to the abbreviation used following the title. For example, GTC after *Our Common Future* refers to the Global Tomorrow Coalition. Prices listed, of course, may change at any time. The key for the abbreviations in the following list is as follows: (L)free loan, (R)rental, (P)purchase, and (RP)rental or purchase.

Sustainable Development Core

Our Common Future. 17 & 13 minute versions, GTC, 1988, (R-$7.50; P-$25)
A graphic overview of sustainable development and the work of the World Commission on Environment and Development and highly recommended as an introduction to the topic. Longer version features WCED Chair, Madame Gro Harlem Brundtland, Prime Minister of Norway.

Race to Save the Planet. Ten one-hour programs, Intellimation, 1990, (P-$275 for series or $29.95 per program).
Produced by WGBH and broadcast by PBS in Fall 1990. Because of the one hour length, teachers are advised to select 20-30 minute segments for use in class.

Program 1. *The Environmental Revolution*
Traces the **historical relationship of humans to their environment**, examining how we co-existed with nature in the past, what changed, and how we are now literally transforming the face of the earth. A very effective treatment of major historical changes from hunter-gathers, to farmers, to industrialization, to today's environmental crisis.

Program 2. *Only One Atmosphere*
Warns of the crisis we may face in the next century—violent storms, heat waves, coastal flooding, disruptions in food supplies, massive tides of ecological refugees—if we don't take steps now to slow down **greenhouse warming**. Also explores the problem of CFCs and the depletion of the ozone layer.

Program 3. *Do We Really Want to Live This Way?*
Examines the price we pay for progress by looking at two dramatic examples of **air and water pollution**: the city of **Los Angeles** and **Europe's Rhine River**. Reflects on how current ways of Western industrial life could be made more environmentally sustainable.

Program 4. *In the Name of Progress*
Analyzes whether **environmental protection and economic development** are inherently in conflict. Visits **Brazil** and **India** to illustrate how some of the world's greatest environmental disasters started out as well-intentioned development projects meant to bring the amenities of modern life to the rural poor.

Program 5. *Remnants of Eden*
Explores ways of protecting **life's diversity** while at the same time addressing the needs of growing human populations. Focuses on **Thailand**'s and **Costa Rica**'s tropical forests, **Oman**'s deserts, **Kenya**'s savannah game parks, and the **American Everglades**.

Program 6. *More for Less*
Tracks the efforts of ordinary citizens in **Iowa, Brazil, Denmark,** and **India** as they search for new ways to harness **energy** and use it more efficiently. Looks at how we can wean ourselves from our dependence on fossil fuels, which contribute to the problem of greenhouse warming.

Program 7. *Save the Earth—Feed the World*
Investigates how farmers in **Australia, Indonesia, West Africa**, and the **American Midwest** are rediscovering some **traditional farming** practices and using **science and technology** to work with nature, rather than conquer it.

Program 8. *Waste Not, Want Not*
Demonstrates how to generate less **waste**, take advantage of recycling, and treat waste. Travels to **Peru, Japan, Denmark**, and **California** to explode some myths and tell some surprising stories.

Program 9. *It Needs Political Decisions*
Zeroes in on three nations in varying stages of economic development—**Zimbabwe, Thailand**, and **Sweden**—to investigate the **power of politics in protecting the environment.**

Program 10. *Now or Never*
Focuses on individuals around the world who are making **critical decisions** at all levels that will determine the quality of life in the 21st century. Encourages every one of us, whether ordinary citizen or world leader, to play a part in striving toward global environmental action.

Spaceship Earth: Our Global Environment. 25 minutes, Worldlink, 1990, (P - $32.95).
Young people host an examination of **deforestation, global warming** and **ozone depletion** on four continents, featuring rock star Sting.

Topical Listing

Agriculture and Hunger

The Business of Hunger. 28 minutes, CWS, 1984, (L)
Analyzes the relationship between agribusiness and hunger in the Third World; also shows US citizens trying to change the system in different ways. Relates agribusiness, environmental degradation, urbanization, and hunger in the **Philippines, Brazil**, the **Dominican Republic, Mexico**, and **Senegal**.

Circle of Plenty. 27 minutes, Bullfrog, 1987, (R-$50.; P-$175.)
Asserts the impracticality of the **Green Revolution** for many of the world's starving peoples, and describes **biointensive agriculture** as offering hope for solving at least part of the world hunger problem.

Famine & Chronic Persistent Hunger. 11 minutes, Hunger, 1989.
This tape explains the difference between famine and chronic persistent hunger and offers the challenge to solve the problem of hunger that millions face each day.

Farmers Helping Farmers. 28 minutes, Bullfrog 1989, (R-$50.; P-$250.)
A group of Canadian farmers that fund food growing projects in direct association with farmers in **Kenya** and **Tanzania**. This is an apolitical example of international cooperation and communication.

Fragile Harvest. 49 minutes, Bullfrog, 1987, (R-$95.; P-$595.)
Filmed in **Ethiopia, Peru, Turkey**, and **North America**, it explores the growing crisis in the world's agriculture. Finds "development" that's driven farmers from the land, increased dependence on agrichemicals, and eliminated indigenous

adapted varieties of food crops. Does not mention the environmental effects of the Green Revolution.

Growing Pains. 26 minutes, CWS, 1988, (L)
Why are there hungry people in a world that grows more than enough food? According to this treatment, it's grown in the wrong place, in the wrong way, and sold at the wrong price. In some Third World countries, luxury crops are grown for the rich world—often to service international debt—while local people are undernourished.

The Politics of Food: Sharing the Land. 20 minutes, CWS, (L)
Rapid industrial expansion in **Brazil** has not trickled down to most Brazilians. Solutions to the problems of Third World debt and human poverty are essential.

Seeds. 28 minutes, Bullfrog, 1987, (R-$60.; P-$395.)
The importance of **genetic diversity** to the world's food supply, and how multinational chemical companies are producing seeds dependent on agrichemicals.

Wheat Today, What Tomorrow? 32 minutes, Bullfrog, 1988, (R-$50.; P-$350.)
Investigation of the disaster facing dryland farmers in western **Australia**, calls for massive planting of trees and a new land ethic—recognizing our role as caretakers of the countryside. This is an apolitical explanation of **desertification**, **deforestation** and **land degradation**.

Will the World Starve? 58 minutes, Coronet, 1987, (P-$99.)
Links political and economic inequity, environmental degradation, and the cycle of poverty in **China**, **Ethiopia**, and **Nepal**.

Economic Development

The Challenge to End Hunger. 20 minutes, CWS, 1987, (L)
Encourages viewers to analyze what producers see as the systemic causes of hunger, such as apartheid, US policy in Central America, export-oriented agriculture, and many foreign aid programs. Stresses inter-relationship of different issues.

Dialogue on International Development. 20 minutes, Bullfrog, 1989, (RP)
Raises questions in a **Canadian** context about international development, such as relationship between social justice and development, the scale of a project as a measure of effectiveness, accountability, and fund raising.

The Mouse's Tale. 10 minutes, CRS, (P-$20)
This animated cartoon explores issues surrounding international food production and its relationship to hunger and famine around the world. A succinct statement of the structural dependency development paradigm.

The Price of Progress. 54 minutes, Bullfrog, 1989, (R-$75.; P-$350.)
Analyzes the social, environmental, and economic costs of some of the World Bank's lending policies in **Indonesia** and **Brazil**.

Third World Challenge to U.S. Policy. 20 minutes, Zenger, 1985, (P)
The League of Women Voters examines the problems of "Third World" nations (i.e. hunger, food production, population, development, resources) and the challenges the U.S. faces. The focus of the program is that of a single human family on spaceship earth.

Energy

Firewood: Other Energy Crisis. 10 minutes, CWS, 1977, (L)
Discusses the need for firewood as an energy source and the impact on erosion as trees are depleted.

The Four Corners: A National Sacrifice Area. 58 minutes, Bullfrog, 1984, (R-$85.; P-$450.)
The hidden cost of uranium mining and milling, coal stripmining, and synthetic fuels development in the homeland of the Hopi, Navajo, and Mormons.

Power Struggle. 58 minutes, Bullfrog, 1986, (R-$85.; P-$350.)
A good explanation of the debate between **renewable** and **non-renewable energy** sources.

International Economy

The Global Community. 51 minutes. Zenger, 1985, (P-$145.)
Explains global interdependence, includes global communications, resources, technology, agriculture and the military.

Linkages: Your Role in the World's Food Connections. 14 minutes, TDP, 1989, (P-$12.)
Young US farm families and socially concerned adults identify with "Third World" farmers and discuss trade policies, "Third World" development, and US agriculture.

Super-Companies. 57 minutes, Bullfrog, 1989, (R-$75.; P-$350.)
Illustrates the role of multinational corporations in the aluminum industry which creates massive social and environmental problems. The effect of one company's policies on **Australia**, **British Columbia**, **Jamaica**, and **Norway** are documented.

World Poverty and Foreign Aid. 58 minutes, Zenger, 1987, (P)
Using experts as guests, the interviewer examines the issues of world poverty and the role of foreign aid.

Pollution

The Hole in the Sky. 58 minutes, Coronet, 1987, (RP)
This program is a study of the hole in the **ozone layer**. It begins with the group of scientists in Antarctica who found the hole. The techniques that were used to find the hole, the causes of the hole, and its impact are explained.

Planet Earth: The Climate Puzzle. 60 minutes, Intellimation, (P)
This program examines the issue of climate change and the factors that may be contributing to the changes.

Waste. 29 minutes, Bullfrog, 1985, (R-$50.; P-$150.)
Connects consumer habits, from the individual to the multinational, with the problem of waste management.

Rainforest

Banking on Disaster. 78 minutes, 3 26 minute sections, Bullfrog, 1988, (R-$90.; P-$450.)
The destruction of the Amazonian rainforest and the disastrous consequences of paving a road through **Brazil's rainforest**, partly financed by the World Bank. This is a 3 part series. It links environmental, social, and native peoples' rights, and charges disinterest among the World Bank's decision-makers.

Blowpipes and Bulldozers. 60 minutes, Bullfrog, 1989, (R-$85.; P-$350.)
The story of a tribe of rainforest nomads in **Borneo** and a Swiss man who's lived with them for 5 years. Their homeland is being logged out of existence.

Keepers of the Forest. 28 minutes, CWS, 1987, (L)
Explores the complex causes and devastating consequences of tropical rainforest destruction in **Central America**, and reveals the productive and sustainable rainforest management system of the forest people.

Water

Acid Rain: New Bad News. 60 minutes, Ambrose Video, 1988, (P)
This program examines the problem of acid rain. Examples of the severity of the problem are illustrated from both the **United States** and **Europe**. Factors contributing to the problem of acid rain as well as efforts to reverse its effect are explained.

Downwind / Downstream: Threats to the Mountains and Waters of the American West. 58 minutes, Bullfrog, 1988, (R-$85.; P-$450.)
Documents the serious threat to water quality, sub-alpine ecosystems, and public health in the **Colorado Rockies** from mining operations, acid rain, and urbanization.

Farmers of the Sea. 60 minutes, Ambrose Video, 1984, (P)
A study in the use of the sea as a source of food, it looks at fishing and sea farming techniques in **Europe**, **North and Central America**, and **Asia**.

From Sea to Shining Sea. 20 minutes, Bullfrog, 1986, (R-$35.; P-$95.)
With the help of Greenpeace, a small town's (Toms River, NJ) grass roots organization takes a stand against a multinational corporation (Ciba Geigy) that is discharging its waste into the Atlantic. An example of a few people making a big difference.

In Our Water. 60 minutes, HMCNJ, 1982, (L)
A documentary about chemical pollution in South Brunswick, New Jersey's drinking water. Illustrates public officials' denial of the existence of a problem, and what one person can do to affect change.

Pointless Pollution. 28 minutes, Bullfrog, 1989, (R-$50.; P-$250.)
How non-point pollution—all runoff pollution that does not come from a single source, such as the discharge pipe from a chemical company or sewage treatment plant—has affected the lives of people in four regions of the US.

Africa

Africa: A Voyage of Discovery with Basil Davidson. 8 hour-long documentaries, contained on 4 cassettes with host Basil Davidson, British author of more than 30 books about Africa. Produced in England, in association with Nigerian Television. SMA (R); (P) Home Vision (Series @ $214.80, 2 program cassettes @ $59.95).

Program I. *Different but Equal.* 57 minutes
For over four centuries Africa was ravished by the slave trade. This has permanently distorted our view of the continent and its people. Basil Davidson goes back to **Africa's origins** to show that, far from having no great art or technology, Africa gave rise to some of the world's greatest early civilizations.

Program II. *Mastering A Continent.* 57 minutes
Examines the way African peoples carve out an existence in an often hostile environment by looking closely at three different communities. A group of Pokot cattle herders in **Kenya** tell how they use the natural environment to their advantage. Two very different farming villages show how in Africa spiritual development goes hand in hand with technological advance.

Program III. *Caravans of Gold.* 57 minutes
Traces the routes of the **medieval gold trade**, which reached from Africa to India and China in the east, and westward to the city states of Italy.

Program IV. *Kings and Cities.* 57 minutes
To explore the ways in which the African kingdoms functioned, Davidson visits Kano in **Nigeria**, where a king still holds court in his 15th century palace, presiding with his council over ancient rituals which continue to command the respect of the people.

Program V. *The Bible and the Gun.* 57 minutes
The slave trade in Africa decimated the population and rent apart the fabric of society. After the slave traders came new kinds of interlopers: first, the explorers and then the missionaries. Next came those interested not in souls but in wealth—gold and diamonds.

Program VI. *This Magnificent African Cake.* 57 minutes
The 1880's saw the beginning of a 30-year "scramble for Africa," which dramatically changed the face of the continent. All of Africa, except for Liberia and Ethiopia, became subject to colonial rule.

Program VII. *The Rise of Nationalism.* 57 minutes
Here the major struggles for African independence—in **Ghana**, **Kenya**,

Algeria, the **Belgian Congo**—are charted. Looks closely at the situations in **Guinea Bissau** and **Mozambique**. Also focuses on the final collapse of the white minority in **Zimbabwe** and then turns to **South Africa**.

Program VIII. *The Legacy.* 57 minutes
Looks at Africa in the aftermath of colonial rule, as the continent seeks ways to come to terms with its diverse inheritance. Interviews with statesmen, including Mugabe in **Zimbabwe**, Shagari in **Nigeria** and Senghor in **Senegal**, illuminate the problems and successes of Africa today.

Africa: Tribalism to Independence. 25 minutes, Zenger, (P-$69.95)
Nigeria is used to illustrate the influence of Islam, Christianity, colonization, independence and industrialization on the traditional cultures of Africa. (P)

Children of Apartheid. 50 minutes, Southern Africa, 1987, (P)
This documentary, narrated by Walter Cronkite, asks South African children for their opinions of apartheid and their vision for their country's future. The program interviews the daughters of Nelson Mandela and Pieter Botha.

The Cry of Reason. 58 minutes, 1988, SMA, (R); Southern Africa, (P)
Rev. Beyers Naude, a pillar of the white **South African** system, chronicles his personal odyssey to becoming a trusted member of the freedom movement.

The Debt Crisis: An African Dilemma. 20 minutes, CWS, 1988, (L)
Africa's critical debt crisis is illustrated through the case of **Zambia**, which with the fall of copper prices, suffered a 25 percent cut in the standard of living in the past decade. While concerned about the burden on its already suffering people, Zambia is attempting to resolve its problems with the international banking community and restructure its economy to take advantage of its abundant natural resources.

Destructive Engagement. 52 minutes, 1987, SMA, (R); Southern Africa, (P)
Crisscrosses the Front Line States—**Zimbabwe**, **Mozambique**, **Botswana**, **Zambia** and **Angola**—in an unprecedented investigation of South Africa's regional war. For the previous six years South Africa directed terrorist attacks, surrogate armies and outright invasions in a destabilization campaign to keep black Africa at bay and maintain dominance of the region.

Generations of Resistance. 52 minutes, 1980, SMA, (R); Southern Africa, (P)
Combines the testimony of survivors of earlier battles with rare archival footage to retrace the long and arduous path to freedom traveled by black **South Africans**. Begins with Bambata's Rebellion of 1906.

Maids and Madams. 52 minutes, HMCNJ, #30,049, 1985, (L)
Examines the tragedy of apartheid through the relationship between black household worker and white employer as a microcosm of the racial issues which divide **South Africa**.

Moving On: The Hunger for Land in Zimbabwe. 52 minutes, 1982, SMA, (R); Southern Africa, (P)
A case-study of how newly independent black states are grappling with the legacies of colonialism and the imposing tasks of development. Contrasting stories of two families, one black and one white.

Roots of Hunger, Roots of Change. 27 minutes, CWS, 1985, (L)
Examines the problem of hunger in **Senegal**, including its historical causes and their impact on the people today. Also examines a model of community development involving Church World Service.

South Africa Belongs to Us. 35 minutes, SMA, 1980, (R)
This intimate film portrays five typical black women in various stations of life and describes how apartheid impoverishes, dehumanizes and ultimately enslaves.

Witness to Apartheid. 36 minutes, SMA, 1986, (R)
This academy award nominated film alerted the world to the daily police terror in South Africa. With Archbishop Tutu as a guide, the film allows viewers to "travel" to South Africa, enter the townships and listen to the voices of the tortured children themselves.

You Have Struck a Rock! 28 minutes, 1981, SMA, (R); Southern Africa, (P)
Though black **South African** women suffer the triple oppression of race, class and sex, they have not been silent. During the 1950s, women took the lead in mobilizing mass opposition to apartheid.

Sources of Audiovisuals

The following sources are listed alphabetically according to the key used to identify them in the preceding listings. Not all sources have been used in the above selections, but we believe teachers will benefit from becoming familiar with their resources.

Ambrose Video Publishers, 381 Park Avenue South, New York, NY 10006; (800) 526-4663.

Asia Resource Center, P.O. Box 15275, Washington, DC 20003; (202) 547-1114.

Bullfrog Films, Inc., Oley, PA 19547; (1-800) 543-FROG.

Coronet Films & Video, 108 Wilmot Rd., Deerfield, IL 60015; (1-800) 621-2131. (Distributors of the PBS NOVA programs. Rental prices, $75-$125; purchasing prices, $99-.)

CRS - Catholic Relief Services, Global Education Office, 209 West Fayette Street, Baltimore, MD 21201; (301) 625-2220.

CWS - Church World Service/CROP, National Office: PO Box 968, Elkhart, IN 46515; (219) 264-3102. New Jersey Office: PO Box 214, Rocky Hill, NJ 08553.

Filmakers Library, Inc., 133 East 58th Street, New York, NY 10022; (212) 355-6545.

GTC - Global Tomorrow Coalition, 1325 G Street, Washington, DC 20005; (202) 879-3040.

Home Vision, PO Box 800, Concord, MA 01742; (1-800) 262-8600 or (508) 263-8200.

HMCNJ - Humanities Media Center of New Jersey, Jersey City State College, Kennedy Boulevard, Jersey City, NJ 07305; (201) 547-3487.

Hunger Project, PO Box 789, San Francisco, CA 94101.

Intellimation, P.O. Box 1922, Santa Barbara, CA 93116; (1-800) LEARNER.

Krasker Memorial Film Library, Boston University, 565 Commonwealth Avenue, Boston, MA 02215; (617) 353-3272 ("Africa on Film and Video").

Maryknoll World Productions, Media Relations, Maryknoll, NY 10545; (1-800) 227-8523. (Video casettes generally cost $19.95 and 16mm film rentals $25.)

Mypheduh Films, Inc., P.O. Box 315, Franklin Lakes, NJ 07415; (201) 891-8240. ("Independent films, Africa and African American.").

New Day Films, 22 Riverview Drive, Wayne, NJ 07470; (201) 633-0212.

Penmaen Ltd., 1341 Ocean Avenue, #110, Dept. NSL, Santa Monica, Ca 90401.

SMA Fathers, Mission Education Department, 23 Bliss Avenue, Tenafly, NJ 07670; (201) 567-0450.

Southern Africa Media Center, California Newsreel, 630 Natoma Street, San Francisco, CA 94103; (415) 621-6196.

TDP - Trade and Development Program, 802 Rhode Island Avenue, NE, Washington, DC 20018.

UNFPA (United Nations Fund for Population Activities), 220 East 42nd Street, New York, NY 10017; (212) 850-5825.

Video Project, The, 5332 College Avenue, Suite 101, Oakland, CA 94618; (415) 655-9050. ("Video and film programs for a safe and sustainable world.")

World Bank Film Library, Rm. D-845, 1818 H Street, NW, Washington, DC 20433.

Worldlink, 8755 W. Colgate Avenue, Los Angeles, CA 90048; (213) 273-7408.

Zenger Video, (a division of Social Studies School Service), 10200 Jefferson Boulevard, Rm. 9, P.O. Box 802, Culver City, CA 90232; (1-800) 421-4246.

Bibliography

The materials that follow are curriculum resources, simulations, periodicals and background readings that are not listed elsewhere in this book. The books under the background reading section will provide the teacher with additional information and analyses regarding sustainable development issues and would be useful for most students who might be researching a paper or special project.

Curriculum Resources

NCoDE Resources, National Clearing House on Development Education. The American Forum for Global Education, 45 John Street, Suite 1200, New York, NY 10038, (212)732-8606; Fax (212)791-4132; E-Mail Dialcom 141:TEN650. This database is listed first because it includes the latest information about programs, materials and practice for teaching about international development issues.

Food for All: Teaching Against Hunger, INTERCOM #102, 1982, American Forum for Global Education, 45 John Street, Suite 1200, New York, NY 10038. (Six lessons for middle elementary and secondary students.)

Global Connections: Development Education for American Teenagers. 1988, American Home Economics Association, 2010 Massachusetts Avenue, N W , Washington, DC 20036.

Healthy Children, Healthy World. Curriculum guide on threats to child survival and strategies, 1986, International Service Association for Health, Inc., P.O. Box 15086, Atlanta, GA 30333.

McCuen, Gary E., World Hunger and Social Justice, Ideas in Conflict Series, 1986, GEM Publications, Inc., 411 Mallalieu Drive, Hudson, WI 54016.

Rohr, Janelle, ed. The Third World, Opposing Viewpoints Series, 1989, Greenhaven Press, Inc., P.O. Box 289009, San Diego, CA 92128-9009.

Shabbas, Audrey and Ayad AlQazzaz, eds., Arab World Notebook, 1989, Najda, 1400 Shattuck Avenue, Suite 7, Berkeley, CA 94709.

Storck, Elise and Joan H. Joshi, Seminar Guide to Entangling Alliances: How the Third World Shapes Our Lives, 1990, The Panos Institute, 1405 King Street, Alexandria, VA 22314. (Originally written for college faculty and leaders of adult discussion groups. See Hamilton, *Entangling Alliances* under background readings.)

Teaching about Developing Nations: The Role of Food and Hunger, 1985, International Service Association for Health, Inc., P.O. Box 15086, Atlanta, GA 30333.

What Citizens Need to Know about World Affairs, 1990, Social Issues Resources Series, Inc., P.O. Box 2348, Boca Raton, FL 33427-2348.

A Whole New World, Canadian Council for International Co-operation, 321 Chapel, Ottawa, Ontario, K1N 7Z2.

Williams, Sonja. Exploding the Hunger Myths: A High School Curriculum, 1987, Food First/Institute for Food and Development Policy, 145 Ninth Street, San Francisco, CA 94103.

World Bank, The Development Data Book: A Guide to Social and Economic Statistics, 1988, 1818 H Street, N W , Washington, DC 20433.

World Bank, GNP per Capita, Poster Kit #3, 1818 H Street, N W , Washington, DC 20433.

World Food Day Curricula for grades 4-7 and 8-12. Church World Service, Office on Global Education, 2115 North Charles Street, Baltimore, MD 21218. (One-hour session on world hunger for entry level learner)

Simulations

Baldicer II by Georgeann Wilcoxson, Legerton-Wilcoxson Associates, 2000 E. Market St., Charlottesville, VA 22901. Revised simulation dealing with food production and distribution.

The Debt Game, 1987, American Friends Service Committee, 15 Rutherford Place, New York, NY 10003. Links hunger at home and abroad, political stability, and economics.

Development Planning and the Local Budget in the Republic of Pedogogia, by Richard Vengroff, 1983, Kumarian Press, 29 Bishop Road, West Hartford, CT 06119.

Ending Hunger: It's Possible, It's Happening, 1979, American Friends Service Committee, 15 Rutherford Place, New York, NY 10008. Simulation game plus set of in-depth study materials.

Karimlan: A Simulation Game on Sustainable Development, 1988, CUSO Education Department, 135 Rideau Street, Ottawa, Ontario, K1N 9K7, Canada.

Periodicals

Development Forum, (Monthly newspaper available in English, French and Spanish) U.N. Division for Economic and Social Information, United Nations, Room DC1-559, New York, NY 10017.

Earthpost: Life and Land from a Global Perspective, (A quarterly student newspaper and teacher's guide) 163 Amsterdam Avenue, Suite 381, New York, NY 10023.

The Economist, (Weekly magazine) P.O. Box 58524, Boulder, CO 80322-8524, 1-800-456-6086.

Fenton, Thomas P. & Mary J. Heffron, eds., Third World Resources: A Quarterly Review of Resources From and About the Third World, Third World Resources, 464 19th Street, Oakland, CA 94612.

Go-Between, (Newsletter) United Nations Non-Governmental Liaison Service, 2 UN Plaza, Room 1103, New York, NY 1103 (212) 963-3120.

Population Education Interchange, (Quarterly newsletter), Population Reference Bureau, 777 14th Street, NW, Washington, DC 20005.

Third World Week, (A weekly 7 page newspaper) South-North News Service, 4 West Wheelock Street, Hanover, NH 03755

World Press Review, (Monthly magazine) The Stanley Foundation, 200 Madison Ave., New York, NY 10016, (212) 889-5155.

Worldwatch Papers, Worldwatch Institute, 1776 Massachusetts Avenue, N W, Washington, DC 20036.

World Wise, (A monthly student international newspaper and teacher's guide) 4 West Wheelock Street, Hanover, NH 03755.

Background Readings

Bach, Julie S. and Lynn Hall, eds., The Environmental Crisis, 1986, Opposing Viewpoints Series, Greenhaven Press, 577 Shoreview Park Road, St. Paul, MN 55126.

CO_2 Diet for a Greenhouse Planet: A Citizens Guide to Slowing Global Warming, 1990, National Audubon Society, 950 Third Ave., New York, NY 10022.

Defries, R. and T. Malone, eds., Global Change and Our Common Future, 1989, (Papers from a National Research Council Forum), National Academy Press, 2101 Constitution Ave., NW, Washington, DC 20418.

Development and the National Interest: U.S. Economic Assistance into the 21st Century, 1989, Agency for International Development, Washington, DC 20523.

Directory of Development Resources: U.S. Institutional Services, Non-U.S. Institutions, Newsletters and Journals, Data Base Services, Training. U.S. Agency for International Development, Washington, DC 20523.

Engle, Ronald J. and Joan G., eds., Ethics of Environment and Development: Global Challenge and International Response, 1990, The University of Arizona Press, 1230 North Park Avenue, Suite 102, Tucson, Arizona 85719.

Environmental Guidelines—Topics: Drinking Water: A Community Action Guide; Farmland: A Community Issue; Groundwater: A Community Action Guide; Waste: Choices for Communities; Household Waste: Issues and Opportunities, 1989, Concern, Inc., 1794 Columbia Road, NW, Washington, DC 20009, (Bulk rates available.).

Fenton, Thomas P. & Mary J. Heffron, eds., Third World Resource Directory: A Guide to Organizations and Publications, 1984, Third World Resources, 464 19th Street, Oakland, CA 94612.

Hamilton, John Maxwell, Entangling Alliances: How the Third World Shapes Our Lives, 1990, Seven Locks Press, P.O. Box 27, Cabin John, MD 20818. (For seminar guide see Storck under Curriculum Resources.)

Here to Stay: A Resource Kit on Environmentally Sustainable Development, 1989, CUSO Education Department, 135 Rideau Street, Ottawa, Ontario, K1N 9K7, Canada.

Hull, Galen Spencer, A Small Business Agenda: Trends in a Global Economy, 1986, University Press of America, Inc., 4720 Boston Way, Lanham, MD 20706.

The Hunger Project, Ending Hunger: An Idea Whose Time Has Come, 1985, Praeger, 521 Fifth Avenue, New York, NY 10175.

Hunger: Report and Recommendations of the New Jersey Commission on Hunger, 1986, Office of the Governor, CN-001, Trenton, NJ 08625.

Joy, Carrol, Believing is Seeing: Attitudes and Assumptions that Affect Learning about Development, 1990, National Clearinghouse on Development Education, 45 John Street, Suite 1200, New York, NY 10038.

Joy, Carrol, Educating about Development: Implications of a Public Opinion Study, 1987, InterAction, 200 Park Avenue South, New York, NY 10003.

Kutzner, Patricia L., and Nickola Lagoudakis, Who's Involved with Hunger: An Organization Guide for Education and Advocacy, 1985, World Hunger Education Service, P. O. Box 29056, Washington, DC 20017.

Lamy, Steven L., ed., Contemporary International Issues: Contending Perspectives, 1988, Lynne Rienner Publisher, Inc. 948 North Street, Boulder, CO 80302.

Lebel, Gregory G. and Hal Kane, Sustainable Development: A Guide to Our Common Future, 1989, Global Tomorrow Coalition, 1325 G Street, NW, Suite 915, Washington, DC 20005-3104.

Morrison, Elizabeth and Randall B. Purcell, Players & Issues in US Foreign Aid: Essential Information for Educators, 1988, Kumarian Press, Inc., 630 Oakwood Avenue, Suite 119, West Hartford, CT 06110-1505.

Our Common Future: A Reader's Guide, 1987, Earthscan Books, Ltd., 1717 Massachusetts Ave., N W , Suite 302, Washington, DC 20036.

Piasecki, Bruce and Peter Asmus, In Search of Environmental Excellence: Moving Beyond Blame, 1990, Simon & Schuster/Touchstone, 1230 Avenue of the Americas, New York, NY 10020.

Population Images, 1987, United Nations Fund for Population Activities, 220 East 42nd Street, New York, NY 10017.

The Portable Symposium: Proceedings from the International Agricultural Trade and Development Symposium, 1989, World Agriculture Project, Center for Rural Affairs, P.O. Box 405, Walthill, Nebraska 68067, (402)846-5428.

Randels, Lynn, Overcoming Isolation Through Development Education: Lessons for the United States from Canada, Sweden, and the Netherlands, 1984, Global Forum, 3441 Oakwood Terrace, N W , Washington, DC 20010.

Silver, Cheryl Simon and Ruth S. Defries, One Earth, One Future: Our Changing Global Environment, 1990, National Academy Press, 2101 Constitution Ave., NW, Washington, DC 20418.

Sivard, Ruth Leger, Women: A World Survey, 1985, World Priorities, Box 25140, Washington, DC 20007.

Sivard, Ruth Leger, World Military and Social Expenditures, Annual, World Priorities, Box 25140, Washington, DC 20007.

Snyder, Margaret, Women: The Key to Ending Hunger, The Hunger Project Papers, No. 8, August 1990, The Hunger Project Global Office, 1 Madison Aveue, New York, NY 10010-3603.

Starke, Linda, Signs of Hope: Working Towards Our Common Future, 1990, Oxford University Press, 200 Madison Avenue, New York, NY 10157-0913.

State of the World's Children, Annual, UNICEF, Division of Information and Public Affairs, 3 U.N. Plaza, New York, NY 10017.

Switching On To the Environment, A Critical Guide to Films on Environment and Development, TVE International Trust for the Environment, 46 Charlotte Street, London, W1P 1LR.

Third World Video and Television Resource Guide, 1989, United Nations Development Forum, P.O. Box 5850, G.C.P.O. New York, NY 10163-5850, (212)963-1544.

Timberlake, Lloyd, Only One Earth: Living for the Future, 1987, Sterling Publishing Co., Inc., 2 Park Avenue, New York, NY 10016.

The Way Up From Poverty: Microentrepreneurship in Latin America and the Caribbean, Distributive Education Clubs of America and Pan American Development Foundation, Atten: Edie Quintrell, PADF, 1889 F Street, N W , Washington, DC 20006; (202) 458-3969.

Wennergren, E. Boyd, et al., Solving World Hunger: The U.S. Stake. 1986, Seven Locks Press, P.O. Box 27, Cabin John, MD 20818.

What Americans Think: Views on Development and U.S.-Third World Relations, 1987, Overseas Development Council, 1717 Massachusetts Ave., N W , Washington, DC 20036.

Who's Doing What in Development Education: A U.S. Development Education Directory, 1988, U.N. Non-Governmental Liaison Service, 2 UN Plaza, Room 1103, New York, NY 10017, (212) 963-3120.

World Bank, Social Indicators of Development, 1989, World Bank Publication, P.O. Box 7247-8619, Philadelphia, PA 19170-8619, (201) 225-2165.

World Commission on Environment and Development, Our Common Future: From One Earth to One World, 1987, Oxford University Press, 200 Madison Avenue, New York, NY 10157-0913.

World History/Cultures Curriculum Guide, Spring 1988, New Jersey State Department of Education, 225 West State Street, CN500, Trenton, NJ 08625.

World Hunger, Development, and Trade, Background paper, 1985, E.A. Jaenke & Associates, Suite 666, 777 Fourteenth Street, N W , Washington, DC 20005.

Free Publications

The following free publications will provide your students with readable primary source materials that regularly treat sustainable development topics. You are encouraged to request your school librarian to write for and display these materials. A sample request letter is included for general use; because the World Development magazine was found to be of exemplary usefulness by our piloting schools, a specific request letter for this magazine is also included.

American Association for World Health
2001 S Street, N W
Suite 530
Washington, DC 20009

Health for All, Pass it Along
An annual report which describes activities schools have used to observe World Health Day (April 7).

American Home Economics Association
2010 Massachusetts Avenue, N W
Washington, DC 20036-1028

International Update
Published three times a year by the International Section; discusses practical aspects of technological change brought on by development, especially problems related to water, waste, energy, pollution, housing, food, and income generation.

Center for Advanced Study of International Development
Michigan State University
306 Berkey Hall
East Lansing, MI 48824-1111

The CASID Connection
A quarterly outreach newsletter, featuring announcements, articles, reviews related to development education. Excellent for definitions, discussion, and analysis of trends.

Coordination in Development, Inc.
475 Riverside Drive
Room 1842
New York, NY 10115

CODEL
Bi-monthly, four-page, newsletter containing case studies of third world development projects and analyses.

Eco-Justice Center for Religion, Ethics, and Social Policy
Anabel Taylor Hall
Cornell University
Ithaca, NY 14853

The Egg
A quarterly journal; excellent source of environmental data for sustainable development issues.

Global Tomorrow Coalition
1525 New Hampshire Avenue,
N W Washington, DC 20036
202-328-8222

Interaction
Monthly organizational newsletter. Lists local, national and media events dealing with sustainable development, as well as updates on Global Tomorrow Coalition work.

Hunger Project
P.O. Box 789
San Francisco, CA 94101

World Development Forum
A twice monthly report of facts, trends and opinion on international development issues.

Instraw
Room S-2294
United Nations
New York, NY 10017

INSTRAW
Published twice a year; journal on women in development. Excellent source for data, case studies, trends, and opinions regarding women and development.

National Association of the Partners of the Americas
1424 K Street, N W
Washington, DC 20005

Partners
Bi-monthly newsletter of organizational trends and events, plus some interesting descriptions and case studies of US state and county collaborative development projects, such as NJ and Haiti.

UNESCO-UNEP
Environmental Education
7. Place de Fontenoy
75700 Paris, France

Connect
Monthly environmental education newsletter. Excellent source of country by country environmental data, as well as global environmental trends and programs, with annotated bibliographies of resource material.

United Nations
Department of Public Information
United Nations Plaza
New York, NY 10017

Africa Recovery
Highlights efforts of work being done to alleviate impact of debt and poverty in Africa.

United Nations
Development Programme
One U.N. Plaza
New York, NY 10017

World Development
Bi-monthly magazine which presents case studies and articles about Third World development--political, social, and economic dimensions are included.

United Nations
Development Programme
One U.N. Plaza
New York, NY 10017

Cooperation South
Magazine published three times a year. Technical cooperation among developing countries.

United Nations
Development Programme
One U.N. Plaza
New York, NY 10017

Source
Quarterly magazine which features articles on water quality, sanitation and health services in the Third World.

United Nations
Environmental Programme
DC2-0803
United Nations
New York, NY 10017

UNEP North America News
A six-page newsletter, containing excellent news briefs about global sustainable environment issues, personalities, and events.

United Nations Fund for
Population Activities
220 East 42nd Street
New York, NY 10017

POPULI
Magazine published quarterly; examines the complex relationships among population, resources and the environment.

United Nations Fund for
Population Activities
220 East 42nd Street
New York, NY 10017

Population
Four, large-size pages of monthly newsletter, available in French, Spanish, Arabic, English. Short news items on population activities, and longer articles on aspects of global population issues.

UN-NGLS
2 UN Plaza
Room DC2-1103
New York, NY 10017

NewsNet
Sixteen-page monthly newsletter; data-filled articles and news briefs as well as resource listings for development education.

US Agency for
International Development
Bureau for External Affairs
AID
Washington, DC 20523

AID Highlights
(not a resource about the AIDS epidemic) Four-page newsletter; US Government perspective on international development and trade issues. Contains useful economic data.

US Department of State
Mailing List Bureau of
Public Affairs
Washington, DC 20520

Excellent source of primary materials.

Dear Sir/Madam:

Please place me on your mailing list to receive

_____.

This publication would be an excellent resource for me in various school projects relevant to sustainable development issues.

Thank you very much.

Sincerely,

United Nations Development Programme
One UN Plaza
New York, NY 10017

Dear Sir/Madam:

Please place me on your mailing list to receive World Development.

This magazine would be an excellent resource for me in various school projects relevant to sustainable development issues.

Thank you very much.

Sincerely,

Resource Organizations

The following organizations supplement those mentioned elsewhere in this chapter and in Chapter 9 and can provide educational resources and action projects for concerned students.

Sustainable Development

Global Tomorrow Coalition 1525 New Hampshire Avenue, N W Washington, DC 20036 (202) 328-8222	The official repository for World Commission on the Environment and Development information and A/V materials in the US, this coalition of over 60 organizations and individuals disseminates a newsletter, Interaction, and meets on a regular basis with the goal of extending public dialogue on long-term global problems of population, resources, environment, and development. GTC tries to help: 1) establish a complete and accurate understanding of current global trends and the ways in which they may interact over time, 2) define the ultimate goals—social, economic, political, ethical, environmental, and cultural—toward which U.S. policy changes should be directed, and 3) reach broad public consensus on how these goals should be achieved in consonance with the values and traditions of a representative democracy.
Rotary International 1 Rotary Center 1560 Sherman Avenue Evanston, IL 60201 (708) 866-3000	Representing 24,500 Rotary Clubs around the world. Preserve Planet Earth Project. Believing that local initiative is the key to sustainable development, Rotary urges members to learn about problems in their own backyards and get involved. Contact your local Rotary Club for more information.
United Nations Non-Governmental Liaison Service 2 U.N. Plaza New York, NY 10017 (212) 963-3118	Information about sustainable development worldwide. Provides referral information about other U.N. agencies involved in sustainable development.

Hunger and Development

American Friends Service Committee
1501 Cherry Street
Philadelphia, PA 19102
(215) 241-7000

AFSC is the Quaker world service organization, providing direct material assistance to grassroots groups in Asia, Africa, Latin America, the Caribbean, the Middle East, and poor U.S. communities. AFSC also supports an extensive U.S. educational program through its regional offices that coordinate human rights campaigns, cross- cultural school programs, foreign policy programs, and local material aid projects.

American Jewish World Service
29 Commonwealth Avenue
Boston, MA 02116
(617) 267-6656

Project L'Chayam has produced a seminar study guide to introduce basic development issues. Root causes of world hunger and poverty are examined.

Bread for the World
802 Rhode Island Ave, N.E.
Washington, DC 20018
(202) 269-0200

A Christian citizens' movement that focuses solely on hunger issues. Members organized by congressional district lobby representatives to obtain government policies that address the basic causes of hunger. Publishes "Leaven," a quarterly newsletter. Extensive catalog of background materials, study guides, and worship aids for congregations.

Campaign to End Hunger
2701 First Ave, Suite 400
Seattle, WA 98121
1-800-888-8750

Conducts a national multi-media educational campaign to promote and sustain a broad-based public movement to end hunger, both in the US and around the world.

CARE
2120 L Street, NW
Washington, DC 20037
(202) 296-5696

Supports food assistance, self-help development, medical assistance, and emergency work relief programs.

Co-op America
2160 M St., NW, Suite 403
Washington, DC 20063
(800) 424-2667

Provides information on alternative lifestyle choices for working toward a sutainable economic system.

CROP (Community Hunger Appeal of Church World Service)
P.O. Box 968
Elkhart, IN 46515
(219) 264-3102
P.O. Box 214
Rocky Hill, NJ 08553
(609) 924-6466
(201) 375-1536

Organizes more than 2000 CROP Walks to raise money for hunger relief and development efforts of member denominations. Provides organizing materials and guidelines for CROP Walk organizers as well as extensive print and audiovisual resources.

Food Research and Action Center (FRAC) 1319 F Street, NW Washington, DC 20004 (202) 393-5060	Nonprofit law firm and advocacy center working with the poor to alleviate hunger in the United States. Works primarily with federal food programs, not only to meet immediate needs, but also as an organizing tool for poor people and their allies in the larger effort to create meaningful social change. Provides written materials, training and organizing help for local groups.
Institute for Food and Development Policy 145 Ninth Street San Francisco, CA 94103 (415) 864-8555	The Institute's "Food First" analysis promotes the message that hunger is caused "not by a scarcity of food, but by a scarcity of democracy." Publishes print, video and curricular resources on all aspects of the hunger issue.
International Development Exchange 777 Valencia Street San Francisco, CA 94110 (415) 621-1494	IDEX links U.S. community groups (schools, churches, rotary clubs) with grassroots development projects in the Third World for the joint purposes of mobilizing material aid and using the projects to educate U.S. groups about the Third World.
International Rescue Committee 1825 Connecticut Ave, NW Washington, DC 20009 (202) 667-7714	Non-sectarian organization that provides worldwide emergency aid, resettlement services, vocational training, and educational support for refugees; recruits volunteers.
National Committee for World Food Day 1001 22nd Street, NW Washington, DC 20437 (202) 653-2404	Organizes the annual observance of World Food Day, October 16, including a teleconference linking panelists with over 500 colleges, universities, and high schools across the country. World Food Day is recognized in over 140 countries around the world.
National Student Campaign Against Hunger 29 Temple Place Boston, MA 02111 (617) 292-4823	A network of student hunger activists organized through Public Interest Research Groups (PIRGS) in 20 states. Promotes a major hunger event each semester, assists students starting hunger groups and serves as a clearinghouse for new project ideas and activities of local groups.
Oxfam America 115 Broadway Boston, MA 02116 (617) 482-1211	A private non-profit international relief and development organization that supports material and technical aid projects in Asia, Africa, Latin America, the Caribbean, and the Middle East. Also provides resources and organizing assistance for students setting up "Fast for a World Harvest" events in schools and on college campuses.
Second Harvest 343 S. Dearborn Street, Suite 516 Chicago, IL 60604 (312) 341-1303	A non-profit tax-exempt corporation that solicits donated food and makes it available through a network of more than 75 food banks around the country. Sets standards for member food banks.

Trickle-Up Programme
54 Riverside Drive, PHE
New York, NY 10024
(212) 362-7958

A group to contact for information about third world entrepreneurs. Has helped to create 10,300 businesses in 83 countries. Each business begins with fifty dollars provided by Trickle Up. The program has helped generate more than 10 million US dollars and has benefitted 65,000 persons all over the world at the grassroot level. From its headquarters in New York, TUP follows up each project and maintains a computerized data bank.

Environment

Citizens' Clearinghouse for Hazardous Waste, Inc.
P.O. Box 926
Arlington, VA 22216
(703) 276-7070

Provides information on establishing a household hazardous waste disposal program in your community.

Clean Ocean Action
P.O. Box 505, Sandy Hook
Highlands, NJ 07732
(201) 872-0111

Works to improve marine waters of NJ/NY coast; research, public education and citizen action.

Environmental Action, Inc.
1525 New Hampshire Avenue, NW
Washington, DC 20036
(202) 745-4870

Provides members with the information they need to be effective environmental activists. Recent focuses have included the "Right to Know" Act, plastic waste and battery disposal.

Environmental Defense Fund
1525 18th Street, NW
Washington, DC 20005
(202) 833-1484

A citizens' interest group staffed by lawyers, economists, and scientists. Takes legal action on environmental issues, provides information on energy consumption, toxic substances, drinking water safety and enforcement, and litigation of water pollution standards.

Friends of the Earth
530 7th Street, SE
Washington, DC 20003
(202) 543-4312

Citizens' interest group, promotes preservation of natural resources, particularly water resources, energy, and coastal and marine environments. Provides information on international environmental affairs and arms control.

Greenpeace USA
1611 Connecticut Ave, NW
Washington, DC 20009
(202) 462-1177

Seeks to protect the environment through non-violent direct action; interests include chemical and nuclear waste dumping, protection of marine mammals and endangered species, nuclear weapons testing, and disarmament.

Inform 381 Park Avenue South New York, NY 10016 (212) 689-4040	Environmental research education. Focuses on research and education in the areas of alternative vehicle fuels, solid waste and recycling technology, hazardous waste and toxins, as well as water supply and irrigation.
League of Women Voters Education Fund 1730 M Street, NW Washington, DC 20036 (202) 429-1965	Educational branch of League of Women Voters of the United States. Provides information on energy, hazardous wastes, land use, and environmental issues including air and water pollution, solid waste disposal, and toxic substances.
National Audubon Society 645 Pennsylvania Ave, SE Washington, DC 20003 (202) 547-9009 New Jersey Audubon Society (201) 766-5787	Citizens' interest group. Promotes preservation of the environment; interests include environmental conservation, air and water pollution, impact of energy policies and technologies on the environment, and alternative energy sources.
Natural Organic Farmer's Association of New Jersey RD 2 Box 263 A Pennington, NJ 08534	Promotes agricultural methods to protect the biological health of the soils and farming practices which stop using synthetic fertilizers or insecticides, etc. Certification procedures for farmers in New Jersey who want to be registered as "organic" and "sustainable."
Natural Resources Defense Council 40 West 20th Street New York, NY 10011 (212) 727-2700	Works to affect legislation toward improving the environment.
Natural Resource Education Foundation of New Jersey 2490 Pennington Road Trenton, NJ 08638	Educates the public on natural resource management in New Jersey through conferences and speakers.
New Jersey Conservation Foundation 300 Mendham Road Morristown, NJ 07960 (201) 539-7540	Protects open space in New Jersey through a revolving land fund, having evolved from a citizen action group.
New Jersey Department of Environmental Protection Communications & Public Education CN 402 Trenton, NJ 08625 (609) 633-1317	Offers workshops and teacher in-service programs on environmental protection issues.

New Jersey Network Community Relations Department CN 777 1573 Parkside Ave. Trenton, NJ 08625-0777 (609) 530-5252	Public television programs on the environment are listed in the network's free monthly listing guide.
New York Rain Forest Alliance 295 Madison Avenue, Suite 1804 New York, NY 10017	Information on what you can do to help save the rain forests.
Rocky Mountain Institute 1739 Snowmass Creek Road Old Snowmass, CO 81654- 9900	Research and education foundation; sustainable use of resources—water conservation is a top priority.
Sierra Club 330 Pennsylvania Avenue Washington, DC 20003 (202) 547-1144	Citizens' interest group that promotes preservation of natural resources. Interests include air and water pollution and the superfund for cleanup of hazardous waste sites. Monitors national and regional legislation.
Union of Concerned Scientists 26 Church Street Cambridge, MA 02238 (617) 547-5552	Produces both print and video educational materials on a variety of issues, including global warming and energy sources. Maintains a national legislative hot line on climate change and energy policy at (800) 444-4827. You may leave a request for further information after the 3-5 minute taped message.
Worldwatch Institute 1776 Massachusetts Avenue, NW Washington, DC 20036 (202) 452-1999	Research organization that focuses on an interdisciplinary approach to environmental problem solving. Areas of interest include natural resources and human needs, and environmental threats to food production.
Youth Environmental Society P.O. Box 441 Cranbury, NJ 08512 (609) 655-8050	This is a private, non-profit organization assisting high school and college youth in building leadership skills through environmental activities.

Study and Travel

Environmental Job Opportunities Bulletin
Institute for Environmental Studies
University of Wisconsin
550 N. Park Street
Madison, WI 53706
(608) 263-3185

Lists latest job openings with environmental agencies, nature centers, consulting firms, colleges and universities in the United States. (10 issues annually, subscription $10.00 per year.)

Gemquest
Global Education Motivators, Inc.
Montgomery County Intermediate Unit Building
Montgomery Avenue and Paper Mill Road
Erdenheim, PA 19118
(215) 233-9558

Gemquest organizes study and travel programs that promote cultural understanding through extensive people to people interaction, homestays, and university study abroad. Educators and students of all ages are invited to participate in numerous trips to all areas of the world, including Kenya, China, Costa Rica, Southeast Asia, Japan, India, Australia, and New Zealand.

Global Exchange
2940 16th Street, Room 307
San Francisco, CA 94103
(415) 255-7296

Global Exchange has a tour program designed to help people get more involved in supporting "Third World" development efforts. Its tours go to Central and Latin America, the Caribbean, and southern Africa.

Habitat for Humanity
Habitat and Church Streets
Americus, GA 31709
(912) 924-6935

A Christian, interdenominational organization, builds and renovates homes for the inadequately sheltered in this country and abroad.

Sister Cities International
120 South Payne Street
Alexandria, VA 22314-9998
(703) 836-3535

Provides support for linkages between communities in the U.S. and other nations. Their technical assistance program focuses on relationships with "developing" nations.

Volunteers for Peace
International Workcamps
Tiffany Road
Belmont, VT 05730
(802) 259-2759

VFP work camps provide an opportunity for young people of all nationalities to work together on two and three week projects. VFP aims to promote international peace and understanding through hands-on construction, agricultural, and other cooperative work. Costs range between $75 and $90, plus travel expenses.

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The Swineherd

Lillá Pozca
Age 10
Hungary

Chapter 9

A Guide to Action for Sustainable Development

Introduction

The National Council for the Social Studies includes within the "Essentials of Social Studies" the fundamental learning category of social participation:

> **Participation Skills**
> ...Connecting the classroom with the community provides many opportunities for students to learn the basic skills of participation, from observation to advocacy...
>
> **Civic Action**
> Social studies programs which combine the acquisition of knowledge and skills with an understanding of the application of democratic beliefs to life through practice at social participation represent an ideal professional standard...Formal education led by creative and humane teachers can provide the knowledge, the tools, the commitment for a thoughtful consideration of issues and can even stimulate the desire to be active. But to achieve full participation, our diverse society must value and model involvement to emphasize for young people the merit of taking part in public life. (*Essentials,* pp. 2-3)

The New Jersey State Department of Education structured its *World History/Cultures Curriculum Guide* in part on the "Essentials of Social Studies"

statement. One of the overarching goals of this required social studies course is included under the heading of "Social Participation" and states: "Students will demonstrate the personal and group interaction skills necessary to be effective members of society." Seven objectives are listed under this goal and range from "Students will keep themselves informed about issues that affect society," to "Students will participate, individually and/or in a group setting, in making decisions and **taking social action**" (*Guidelines*, p. 13—emphasis added).

As of the writing of this *Curriculum Framework* (the summer of 1990), the New Jersey Department of Education is drafting core social studies proficiencies for both United States History and World History/Cultures. This proficiencies statement continues to include "social participation" as an essential element for students in both courses.

The creative challenge for teachers is to find ways to provide opportunities for civic participation within the structure of an academic course, and not just as an option for extracurricular activities, e.g., through a club. Of course, students should in no way be coerced or manipulated to undertake any particular action. On the other hand, if the social studies *essentially* require active participation, students *may* be appropriately required to undertake *some* form of action based on their freedom to choose from among alternatives, which they have helped to generate and which they have studied in some depth.

In order to assist teachers in identifying possible action alternatives in which students may participate as a result of their study of critical global issues, we are providing the resources in this chapter. These suggestions are by no means exhaustive or all-inclusive. They are suggestive, and we encourage the teacher once again to involve the students in proposing possibilities for meaningful action on such issues. However, in order to be helpful to both teachers and students, we are suggesting a wide range of possibilities and have included as well a number of organizations that can provide resources and assistance to such projects. For additional resource organizations and publications, please see Chapter 8.

We owe special thanks to Clean Ocean Action, Sandy Hook, Highlands, New Jersey, for the list of lifestyle actions below. Other action suggestions are a combination of ideas taken from such sources as: *Earth Day Project Ideas,* Stanford University; *Family Circle* magazine, "101 Suggestions for Environmentally Sound Living in the 1990s," February 1, 1990; *Hunger Action Handbook,* Withers, Leslie and Tom Peterson (eds.), *Seeds Magazine;* ideas from project team members; and what has become the collective wisdom in the public domain.

The action suggestions are grouped under four headings:

1. actions that involve **educating** oneself and others,
2. actions involving one's own **lifestyle**,
3. **political action** focused on persuading elected representatives to do something, and
4. **social action** directed toward the wider community.

What Students Can Do

Education

- Inform and educate yourself and others. Read alternative viewpoints in addition to the mainstream media, check on courses or lectures offered at nearby universities or colleges, and contact other individuals and organizations for background information and publication lists.
- Research a particular region in the "Third World" and your community's ties to that region.
- Sponsor a town-wide contest on the best ideas for environmentally sustainable economic growth for your town or region.
- Start a student project to generate alternative energy ideas for your region. Submit a report to county government officials.
- Write brief but informative letters to the editors of local newspapers, either to respond to their coverage of a specific issue or event, or to call their readers' attention to an important issue.
- Invite local and state officials and staff to talk in a public forum about issues which concern you.
- Join with other groups in your community or organize your own community activity to celebrate World Food Day (October 16), Earth Day (April 22), World Environment Day (June 5), Human Rights Day (December 10), and other events of global significance.

- Put together an exhibit that demonstrates how much energy, natural resources and landfill space recycling can save.
- Help compile and promote a list of environmentally responsible companies in your community. Contact: The Council on Economic Priorities, 30 Irving Place, New York, NY 10003, (212) 420-1133.
- Call or visit companies in your community. Talk with persons responsible for environmental and safety matters. What are they currently doing? How have their approaches changed over the past five or ten years?
- Research industry initiatives for the environment. Contact: UNEP Industry and Environment Office, Tour Mirabeau, 39-43 quai Andre Citroen, 75739 Paris Cedex 15, France.
- Research the International Chamber of Commerce initiative, Industry Charter for Sustainable Development. Contact: The International Chamber of Commerce, 38 Coure Albert 1er, 75008, Paris, France.
- Contact Rotary International, 1 Rotary Center, 1560 Sherman Avenue, Evanston IL 60201, and inquire about their Preserve Planet Earth project. Ask how your school might cooperate with their community initiatives for the project and make some suggestions of your own. Request a copy of their Preserve Planet Earth brochure which describes the project. (Rotary has 24,500 clubs and 1,100,000 members around the globe.)
- Organize an essay contest with a sustainable development theme, such as the environmental, economic and social consequences of your community's adopting sustainable development policies by Earth Day 2000.
- Teach children about growing trees from seeds. Contact: Trees For Life, 1103 Jefferson St., Wichita, KS 67203, (316) 263-7294.
- Write a children's book with a sustainable development theme.
- Hold an environmental poster or T-shirt designing contest.
- Organize a play or puppet show with a sustainable development theme.

Life Style

- Recycle. Recycling saves money, energy and resources. Virgin materials must be forested, mined or drilled, processed and manufactured—all of

which pollute. Recycle old clothes, eye glasses, furniture and appliances by donating them to local charitable organizations.

- Reuse. By reusing products, such as plastic containers and utensils, not only do we conserve landfill space, we also conserve resources by not having to create new items.
- Revise your daily activities and become less wasteful. Save water by using less to wash the car, the dishes, or yourself; save energy by turning out lights, or by not leaving the car running. Change your purchasing habits...when purchasing take-out items, bring your own containers—coffee mug, bag, salad, or sandwich container.
- Reduce the amount of pollution in your home. Toxic products and processes are used daily by the uninformed. Drain cleaners, oven cleaners, pesticides, etc. contain harsh chemicals that seriously contaminate our waterways and homes. Inexpensive, effective, easy-to-use environmentally-safe alternatives exist, such as borax for general cleaning chores. Gardeners can use beneficial insects such as ladybugs to combat pests in the garden rather than pesticides.
- Resist the easy way out by not purchasing convenience items—microwavable meals, disposable diapers, razors, pens, etc. All plastics generate toxics, use up precious fossil fuels, are generally not recyclable, and end up in our landfills . Environmentally, using disposable plastics makes no sense.
- Refuse to buy items that are not biodegradable, not recyclable, are thrown away after one use, or that contain dangerous substances. By producing fewer wastes, we send a message to manufacturers that we want environmentally safe products.
- Remember, everything you do affects the environment, whether positively or adversely. No act is isolated. Consider this: if it goes down a drain, down a sewer, into a gutter, on a lawn, in the air, or leaks from a landfill, it eventually ends up in the ultimate "sink"—our ocean.

Political Action

- Identify problems in your community that are related to broader regional, national, or international issues (economic development, waste disposal, pollution control, conservation and recycling, jobs, housing, and public services, etc.); take an active role in public meetings and activities focused on these issues, and work to get these issues on local and state ballots.

- Contact local, state, and national political leaders to make your views known, either individually or collectively. To find out Congressional phone numbers, call: (202) 224-3121. Also, persuade others to write or make phone calls. Letters to the President of the United States, a member of the House of Representatives, or a Senator are addressed to:

  President of the United States
  The White House
  Washington, DC 20515
  (Dear President _____:)

  The Honorable _____
  U.S. House of Representatives
  Washington, D.C. 20515
  (Dear Representative _____:)

  The Honorable _____
  U.S. Senate
  Washington, D.C. 20510
  (Dear Senator _____:)

- Research the current federal Foreign Assistance Act to see what activities are supported and which countries and regions receive how much assistance. Express your opinions on the proposed legislation or fiscal authorization to your Representative and Senators. Contact the local office of your Representative, which is listed in the telephone directory, for copies of the proposed legislation.
- Work with your local government to set up a curbside recycling program in your community. Contact: The Environmental Defense Fund, 257 Park Ave., S., 16th Floor, New York, NY 10010, (212) 505-2100.
- Encourage your state government to adopt a "bottle-bill" that requires a deposit on all beverage containers. Contact: Environmental Action, 1525 New Hampshire Ave., NW, Washington, DC 20036, (202) 745-4870.
- Encourage your city council to require energy and water conservation information in monthly utility bills.
- Encourage your city council and all departments and offices to recycle and use recycled paper.
- Urge your local government to improve bike lanes and to expand public transportation.
- Encourage your local government to plant trees in public parking lots and along streets and use reclaimed water for trees and landscape.
- Approach your city council about starting a household hazardous waste disposal program. Contact: The Citizens Clearinghouse for Hazardous Waste, P.O. Box 926, Arlington, VA 22216, (703) 276-7070.

- Organize an environmental forum involving your local elected officials. Contact: The League of Conservation Voters, 2000 L St., NW, Suite 804, Washington, DC 20036, (202) 785-8683.
- Start a community group that focuses on the relationships of local environmental and economic issues and reports to the city council.
- Organize a letter writing campaign to elected officials urging them to support a specific local sustainable development project. Request that an elected official speak about the issues at a town hall meeting.
- Research how to grow a pesticide- and chemical fertilizer-free lawn. Present your research to your town council or make a presentation at your school PTA meeting. Contact: The American Defender Network, Box 911, Lake Zurich, IL 60047, (312)381-1975

Social Action

- Enter a partnership in a local community or school with a "Third World" country. See how your school or community could provide assistance for a specific development need. What can this community teach you about the development process? Contact: Peace Corps Partnership, 806 Connecticut Avenue, NW, Suite M-1210, Washington, DC 20526; 1-800-424-8580.
- Write to manufacturers and retailers. Urge them to supply recyclable products without unnecessary packaging.
- Volunteer to help at a food pantry or soup kitchen twice during the next four weeks.
- Set up a recycling program in your office, school, place of worship or other social institution and encourage the use of recycled paper.
- Organize a campaign to encourage your local grocery store to offer organic produce, non-toxic cleaners, products in recycled containers and reusable shopping bags.
- Compile and distribute a list of stores in your community that carry energy-efficient light bulbs and appliances, water-saving devices and recycled paper. Contact: The American Council for an Energy Efficient Economy, 1001 Connecticut Ave., NW, Suite 535, Washington, DC 20036, (202) 429-8873.

- Organize a bike ride for the environment. Contact: The League of American Wheelmen, 6707 Whitestone Rd., Suite 209, Baltimore, MD 21207, (301) 944-3399.
- Start or join a tree-planting project in your community. Contact: Global ReLeaf, P.O. Box 2000, Washington, DC 20013, (202) 667-3300.
- Convert an empty lot into a community park. Contact: National Celebration of the Outdoors, 1250 24th St., NW, Suite 500, Washington, DC 20037, (202) 293-4800.
- Set up a community garden complete with a compost pile. Composting can be a reality on a large scale also. Dade County, Florida contains the world's largest composting plant, operating 20 miles outside the city of Miami, serving a community of a quarter of a million people. Contact: The New Alchemy Institute, 237 Hatchville Rd., East Falmouth, MA 02536, (508) 564-6301, and Cornucopia Project of New Jersey, Inc., 12 Terrace Avenue, Nutley, NJ 07110, (201)667-0079.
- Organize a beach clean-up or get involved with a "non-point" pollution campaign. Contact: Clean Ocean Action, Box 505, Sandy Hook, Highlands, NJ 07732.
- Help with the upkeep of nature trails.
- Adopt a local river or stream and protect it from pollution and development. Contact: Save Our Streams, The Izaak Walton League of America, 1401 Wilson Blvd., Level B, Arlington, VA 22209, (703) 528-1818.
- Set up and promote a farmer's market in your community. Contact: Project for Public Spaces, 153 Waverly Place, New York, NY 10014, (212) 620-5660.

Resources for Taking Action

Many of the previously suggested activities were gleaned from the following publications:

Direct Action

Alderson, George and Everet Sentman, How You Can Influence Congress: The Complete Handbook for the Citizen Lobbyist, 1979, E.P. Dutton, 2 Park Avenue, New York, NY 10016.

Benjamin, Medea and Andrea Freedman, Bridging the Global Gap, 1989, Seven Locks Press, P.O. Box 27, Cabin John, MD 20818. Describes growing internationalist movement that is focusing national attention on the interdependence of nations and on the connections between local and international struggles.

Congressional Quarterly Inc., Washington Information Directory 1986-87, 1986, 1414 22nd Street, NW, Washington, DC 20037.

League of Women Voters, 1730 M Street NW, Washington, DC 20036:

- Getting Out the Vote: A Guide for Running Registration and Voting Drives, 1984. Practical information on organizing a drive, working with volunteers and election officials and maintaining nonpartisanship.
- Tell It to Washington, updated every two years. Includes Supreme Court justices, cabinet officers and useful Washington phone numbers. Tips on effective lobbying.

National Boycott News. Institute for Consumer Responsibility, 6506 28th Avenue, NE, Seattle, WA 98115, (206) 523-0421. This quarterly publication lists boycotts called by organizations working on human rights, animal rights, peace, labor, and the environment. It explains why each boycott is called, allows the corporation being boycotted an opportunity to respond, and gives updates on continuing boycotts.

Rossie, Chuck, ed., Media Resource Guide, 1985, Foundation for American Communications, 3383 Barham Blvd., Los Angeles, CA 90068. Practical guide explaining how your group can get the attention of newspapers and how to present information in interesting and usable ways.

Shopping for a Better World, 1988, Council on Economic Priorities, 30 Irving Place, New York, NY 10003, (212)420-1133.

Environment

Conservation Action Handbook, 1987, Sierra Club, San Francisco, CA 94108, (415)981-8634.

Corson, Walter H., ed., Citizens' Guide for Sustainable Development, Global Tomorrow Coalition, 1325, G Street, NW, Suite 915, Washington, DC 20005-3104.

Javna, John, 50 Simple Things Kids Can Do to Save the Earth, 1989, Earthworks Press, 1400 Shattuck Avenue, Berkeley, CA 94709.

Javna, John, 50 Simple Things You Can Do to Save the Earth, 1989, Earthworks Press, 1400 Shattuck Avenue, Berkeley, CA 94709.

Living in the 1990's, Family Circle, February 1, 1990. 101 suggestions for environmentally sound living in the 1990's.

National Audubon Society, The Guide for Citizen Action, 645 Pennsylvania Avenue, SE, Washington, DC 20003.

National Wildlife Federation, The Citizen and Environmental Policy, 8925 Leesburg Pike, Vienna, VA 22180.

Seventh Generation—Products for a Healthy Planet, catalog containing many factual tidbits on recycling, etc., 10 Farrell Street, S., Burlington, VT 05403.

Wesley, Edwin, Easy Ways to Save Water, Money and Energy at Home. Potomac River and Trails Council, 1718 N Street, NW, Washington, DC 20036.

Hunger and Development

Buell, Becky, Alternatives to the Peace Corps: Gaining Third World Experience, 1987, Food First, 145 Ninth Street, San Francisco, CA 04103. Raises questions about the role of volunteers in third world countries and gives suggestions on other volunteer programs.

Church World Service/CROP, Organizational Guide for a CROP Hunger Walk, P.O. Box 968, Elkhart, IN 46515. Includes step-by-step timeline, committees needed, publicity guidelines and almost everything else needed to organize a small to medium-sized hunger walk.

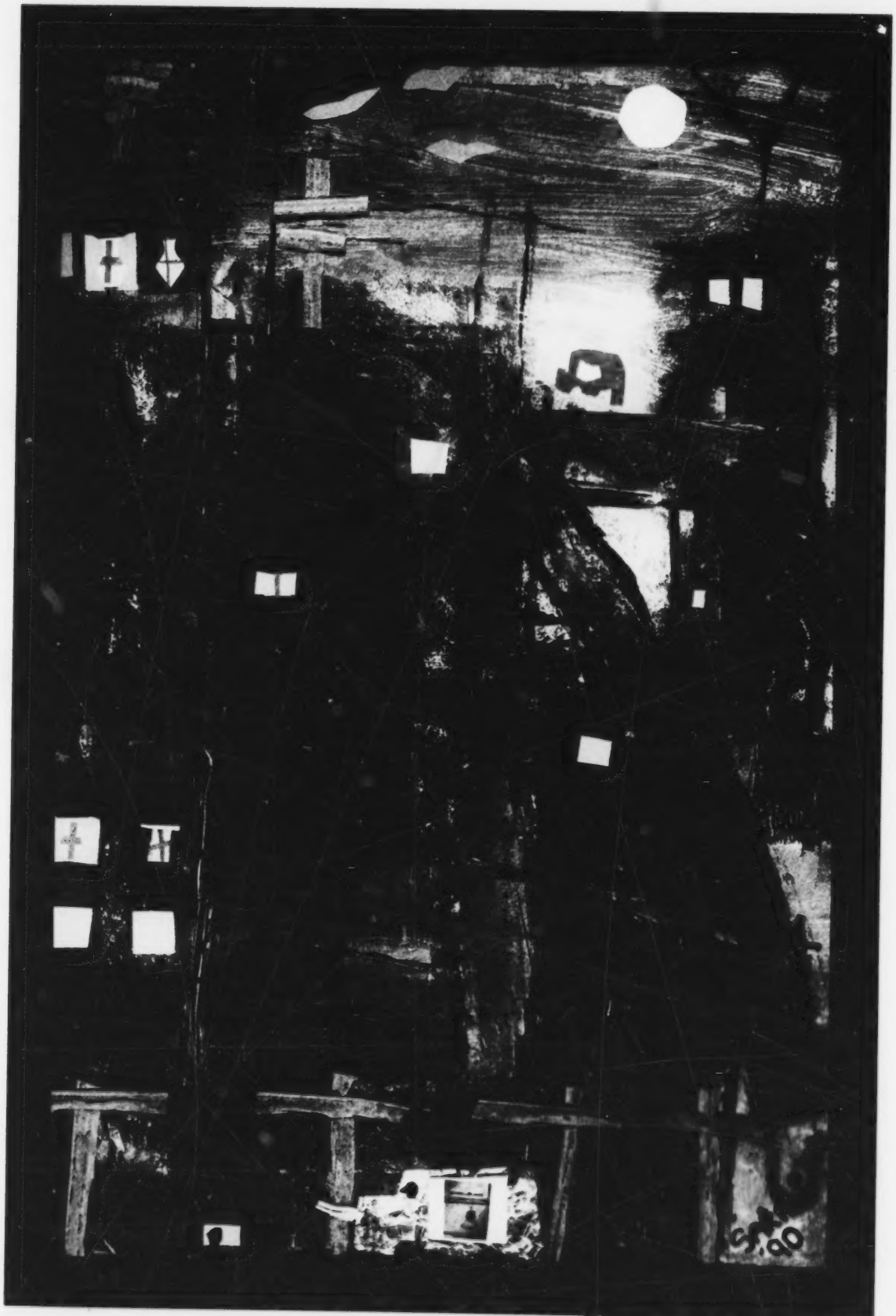
Food Research and Action Center, How to Document Hunger in Your Community, 1983, Food Research and Action Center, 1319 F Street, NW, Washington, DC 20004. By researching such areas as changes in health, demand, and economic data, you can find out about hunger in your own neighborhood.

Harrell, Patricia Sinnott and Ellen Hayes Wright, Partners in Action: A Guide to International Action Projects, 1990, International Service Association for Health, Inc., P.O. Box 15086, Atlanta, GA 30333.

Oxfam America, Fast for a World Harvest Organizer's Guide, Oxfam America, 115 Broadway, Boston, MA 02116. Guide for planned fasts and other activities on school campuses.

Withers, Leslie and Tom Peterson, eds., Hunger Action Handbook, 1987, Seeds Magazine, 222 East Lake Drive, Decatur, GA 30030. Describes the simplest, most effective ways to address hunger in your community, your country, and around the world.

Wright-Deitelbaum, Dianne, How to Start a Food Pantry. 1984, Interfaith Hunger Coalition, 1010 South Flower Street, Suite 404, Los Angeles, CA, 90015. Written for groups setting up pantries in Los Angeles, but useful anywhere.



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Dim City

Sarah Graves
Age 10
Australia

Chapter 10

Test Questions
Introduction

The following bank of test questions has been generated from all twelve chapters of the World Commission on Environment and Development's report, *Our Common Future.* Teachers are encouraged to select questions that reflect the topics they cover with their students. Following the test questions there is a blank answer sheet as well as a sheet of correct answers.

We recognize the fact that multiple choice tests have major limitations. These questions, however, have been useful for both pre- and post-testing purposes in our project. We have used questions 1 through 40 as a pre-test and questions 41 through 80 as a post-test. Each set of 40 questions generally follows the content outline of *Our Common Future.*.

These questions also have been useful for some student assessment of classwork. Teachers in our pilot schools have made good use of other ways for assessing student knowledge as well—including student participation in role plays, class reports, and essay questions in which students analyzed such things as development options for their potential sustainability.

Questions developed by Joseph T. Moore, Professor of History and Social Studies Education, Montclair State College, NJ.

Test Questions

1. The word "sustainable" means
   A. out of reach
   B. ability to suffer over a long period of time
   C. capable of being maintained over a long period of time
   D. a condition already achieved.

2. According to the idea of "sustainable development,"
   A. technology can solve all environmental problems
   B. the most rapid possible development of the earth's resources is desirable
   C. the environment will not be an important factor in future prosperity
   D. the effect of human needs on the physical environment must be considered.

3. The term for the natural systems which support life on earth is
   A. polity
   B. economy
   C. ecology
   D. biology.

4. In an ecosystem,
   A. each of its parts is independent of its other parts
   B. loss of one part has no effect on another part
   C. the loss of one part improves other parts
   D. all of its parts are interconnected.

5. Programs of sustainable development encourage
   A. each nation to go its own way
   B. competition among nations
   C. cooperation among nations
   D. people to be independent of each other.

6. A key element of sustainable development is the
   A. quality of the environment
   B. way technology is used
   C. rate of population growth
   D. all of the above.

7. An example of a nonrenewable resource is
   A. wood
   B. oil
   C. grain
   D. all of the above.

8. Compared to a poor person, a rich person consumes natural resources
   A. at a rate which cannot be calculated
   B. at a slower rate
   C. at the same rate
   D. at a faster rate.

9. At the present time, the natural environment of Planet Earth is
   A. managed by the United Nations
   B. managed on a global basis
   C. managed continent by continent
   D. not managed on a global basis.

10. Rapid population growth
   A. cannot be controlled
   B. puts pressure on environmental resources
   C. is not related to sustainable development
   D. is more common in rich countries than in poor ones.

11. Population growth is affected by
   A. religious beliefs
   B. social practices
   C. education levels
   D. all of the above.

12. At the present time, the actual amount of food being produced in the world is
   A. declining slowly
   B. declining rapidly
   C. remaining constant
   D. greater than ever before.

13. The use of chemical fertilizers and pesticides in farming
   A. is most common in countries where there is famine
   B. has no effect on a region's ecosystem
   C. changes a region's ecosystem
   D. does not increase food production.

14. "Desertification" refers to
    A. changing from hunting-gathering to agriculture
    B. leaving one area to move to another
    C. the advancing of deserts
    D. the use of irrigation techniques to push back the desert.

15. Calling the world a "global village" suggests that
    A. the world is too small
    B. people are interdependent
    C. cities are unhealthy places in which to live
    D. all countries are overpopulated.

16. If all the world's rice farmers used the same kind of seeds, the world's rice crop would be
    A. more vulnerable to changes of various kinds
    B. less vulnerable to changes of various kinds
    C. unaffected by changes of various kinds
    D. safer from changes in the long run.

17. One effect of preserving ecosystems is that the variability of species is
    A. unaffected
    B. reduced
    C. increased
    D. protected.

18. Use of gas, oil and coal to generate energy causes which problem?
    A. acid rain
    B. global warming
    C. air pollution
    D. all of the above.

19. Industry creates products for a nation by
    A. making wiser use of farmland
    B. preserving natural resources
    C. not depending on natural resources
    D. changing raw materials into manufactured goods.

20. Industry, compared to agriculture, requires
    A. no money to start up
    B. less money to start up
    C. the same amount of money to start up
    D. more money to start up.

21. A key factor in sustainable development is industry which
    A. uses resources wisely
    B. does not overload the environment with pollution
    C. responds to environmental protection laws
    D. all of the above.

22. In the world as a whole, this century has been marked by
    A. a balance of urban and rural populations
    B. decline of cities
    C. growth of cities
    D. an increase in rural population.

23. A "commons" can be defined as
    A. parts of Planet Earth which are not controlled by any one country
    B. an abundant resource
    C. a development which is not unusual
    D. a part of Planet Earth which one nation controls for the benefit of other nations.

24. An example of a "commons" is
    A. a large city
    B. an iron mine
    C. the world's oceans
    D. all of the above.

25. The Outer Space Treaty says that
    A. nations are free to control certain parts of outer space
    B. no nation can claim outer space as its own
    C. nations may put a limited number of nulear weapons in space
    D. no nation may pollute outer space.

26. A nuclear war's effect on the environment would be
    A. short-term
    B. long-term
    C. limited to a radius of 1,000 miles
    D. minor.

27. Programs to create more destructive weapons of war
    A. require investment of large amounts of money
    B. require use of natural resources
    C. require use of human resources, such as scientists
    D. all of the above.

28. In the future, nations are likely to have conflicts over environmental resources
    A. less than in the past
    B. more than in the past
    C. at about the same rate as in the past
    D. at a rate which is impossible to predict.

29. To achieve sustainable development,
    A. many changes in the policies of nations will be necessary
    B. only slight changes in the policies of nations will be necessary
    C. no changes in the policies of nations will be necessary
    D. a world government will be required.

30. To achieve sustainable development, groups of people will have to
    A. educate individual people
    B. change the behavior of institutions and corporations
    C. change the laws of the world's nations
    D. all of the above.

31. Choices made by individual consumers about what they buy
    A. can help to achieve sustainable development
    B. have little impact on sustainable development
    C. have no impact on sustainable development
    D. cannot be changed.

32. In order to achieve global sustainable development, the people of the world need to
    A. devise strategies to do so
    B. exploit natural resources quickly
    C. preserve all natural resources
    D. all of the above.

33. If a country has a 40% literacy rate, it means that
    A. 40% of the people cannot read and write
    B. 40% of the adults can read and write
    C. 40% of the males can read and write
    D. 40% of school age children can read and write.

34. The Physical Quality of Life Index includes
    A. infant mortality rate
    B. literacy rate
    C. life expectancy at age one
    D. all of the above.

35. The dramatic increase in population growth rates since 1950 has resulted from
    A. increased access to formal education
    B. periodic famines
    C. a sharp decrease in death rates in developing countries
    D. an increase in birth rates in industrialized countries.

36. A fair distribution of a country's resources would require that
    A. men, as the main wage earners, would be entitled to more than women
    B. men, women and children would all benefit
    C. its form of government would have to be changed
    D. none of the above.

37. On every continent, increases in family income, child survival rates and nutrition can be correlated to
    A. lower pay for the male head of the household
    B. population growth
    C. a rise in female literacy rates
    D. all of the above.

38. In Africa, 80% of agricultural work is performed by
    A. children
    B. men
    C. women
    D. men and women equally.

39. The 1959 treaty governing Antarctica
    A. gives the U.S. and U.S.S.R. exclusive rights to explore its natural resources
    B. bans nations from scientific and other investigations
    C. focuses mainly on protecting animals
    D. maintains it for peaceful uses only, and promotes scientific investigation.

40. Within 15 years, most of the world's largest cities will be located in
    A. the United States
    B. Finland, Denmark, Norway and Sweden
    C. the developing world
    D. Western Europe.

41. "Sustainable development" can be defined as development that
    A. raises the prosperity of poor nations, at the expense of rich nations
    B. concentrates on the prosperity of the United States
    C. concentrates on prosperity in the future, rather than in the present
    D. meets the needs of the present without preventing future generations from meeting their needs.

42. The term "economy" means
    A. the system of water, air, resources and living beings
    B. a system of producing, distributing and consuming wealth
    C. creating more wealth
    D. making everything small, such as cars.

43. The main components of the ecosystem include
    A. air, water, soil and living beings
    B. people, animals, insects and birds
    C. trees, shrubs, grasses and plants
    D. fish, crustaceans, mollusks and algae.

44. The oceans of air and water
    A. stop at the boundaries of countries
    B. do not stop at the boundaries of countries
    C. need not be a common concern of nations
    D. are not related to human interdependence.

45. Sustainable development involves
    A. use and conservation of natural resources at the same time
    B. conservation of natural resources, not their use
    C. use of natural resources, not their conservation
    D. neither use nor conservation of natural resources.

46. One object of sustainable development is to
    A. promote harmony between humanity and nature
    B. make all people equal in their standard of living
    C. stop the use of natural resources
    D. reduce the earth's total population.

47. Which group consists only of renewable resources?
    A. wood, coal, nuclear power
    B. oil, ocean tides, natural gas
    C. falling water, the sun, wind
    D. all of the above.

48. Individual wealth and the number of people in a country are
    A. related to the climate
    B. necessarily related
    C. not necessarily related
    D. related to annual rainfall.

49. The economies of the countries of the world are
    A. becoming more interdependent on each other
    B. becoming more independent of each other
    C. neither more nor less interdependent than in the past
    D. neither more nor less independent than in the past.

50. "Zero population growth" means that
    A. the birth and death rates are equal
    B. the birth rate is greater than the death rate
    C. the death rate is greater than the birth rate
    D. both the birth and death rates are zero.

51. The amount of pressure on an environment is influenced by
    A. total population
    B. where the population is located
    C. ability of people to move
    D. all of the above.

52. Many of the world's people live in hunger because
    A. there is not enough food for everybody
    B. food is not distributed equitably
    C. they are too lazy to grow their own food
    D. there are not enough farmers in the world.

53. At the present time, the world's food supply is distributed
    A. unevenly
    B. according to people's needs
    C. by United Nations food coordinators
    D. so as to eliminate hunger in the world.

54. "Deforestation" leads to
    A. use of wood for fuel
    B. soil erosion
    C. improved use of trees
    D. an increase in the supply of oxygen.

55. "Equity" in the distribution of food means
    A. everyone gets an equal share
    B. everyone gets a fair share
    C. people can save for the future
    D. long-term food supplies are guaranteed.

56. A major cause of the extinction of an animal or plant species is
    A. better farming
    B. changes in how people govern themselves
    C. habitat change
    D. all of the above.

57. Conservation of living natural resources is
    A. important for sustainable development
    B. not related to sustainable development
    C. not related to the ecosystem
    D. important until technology can find substitutes.

58. Sustainable development depends, in part, on
    A. efficient use of energy resources
    B. heavier reliance on coal and oil
    C. total reliance on nuclear energy
    D. only using renewable resources.

59. Industry creates products for people to use
    A. without the risks of pollution
    B. but adds pollution to the environment
    C. with no effect on the environment
    D. so as to reduce the use of natural resources.

60. Agriculture in "developing countries," compared with agriculture in "developed countries," requires
    A. fewer workers per acre
    B. more workers per acre
    C. the same number of workers
    D. no workers, since plants and animals grow by themselves.

61. Economic development of a country is almost always accompanied by
    A. growth of cities
    B. migration from rural areas
    C. long-range overall increases of population
    D. all of the above.

62. The rapid growth of large cities usually
    A. degrades the environment
    B. improves the environment
    C. has little effect on the environment
    D. has no effect on the environment.

63. An example of a "commons" is
    A. the world's oceans
    B. the earth's atmosphere
    C. outer space
    D. all of the above.

64. The international agreement called "The Law of the Sea"
    A. is an attempt to manage the world's oceans
    B. restricts the catch of tuna fish
    C. means that concern for the sea should prevail over all other concerns
    D. allows nations to pass their own laws governing the oceans.

65. At the present time, there are
    A. lots of useless objects in orbital space
    B. virtually no useless objects in orbital space
    C. many nuclear weapons orbiting the Earth
    D. many ways to remove useless objects from space.

66. Weapons which could do damage to the environment are
    A. nuclear
    B. chemical
    C. biological
    D. all of the above.

67. Military spending often takes place at the expense of
    A. good salaries for soldiers
    B. only the richest taxpayers
    C. social programs
    D. investment of money in weapons research.

68. The security of nations and sustainable development
    A. should not be matters of common concern
    B. cannot both be achieved
    C. are unrelated
    D. go hand in hand.

69. To achieve sustainable development,
    A. the behavior of individual people does not matter
    B. many changes in the behavior of individual people will be necessary
    C. no changes in the behavior of individual people will be necessary
    D. only the behavior of large corporations matters.

70. In order to achieve sustainable development, people need
    A. information
    B. concern for the problem
    C. willingness to take action
    D. all of the above.

71. In order for a person to relate buying habits to sustainable development, he or she must understand that global problems are
    A. not affected by the behavior of individuals
    B. interconnected and shared
    C. the sole responsibility of governments
    D. not affected by decisions made today.

72. To achieve sustainable development on a global scale, millions of individual people will have to
    A. change some of their currents habits of consumption
    B. see how their lifestyles have a worldwide effect
    C. understand that pollution of local air and water affects the whole world
    D. all of the above.

73. If life expectancy in a country is 42 years, this means that
    A. everybody lives to be 42
    B. on the average, people live to be 42
    C. most children will die before they reach 42
    D. there will be no people above the age of 65.

74. There are countries in the world where safe water is available to as few as which percentage of people?
    A. 80%
    B. 60%
    C. 40%
    D. 20%

75. In the world's poorest countries there are as few as
    A. one physician for every 250,000 people
    B. one physician for every 100,000 people
    C. one physician for every 25,000 people
    D. one physician for every 250 people.

76. Generally speaking, which item has the greatest effect on how wealth is distributed among the people of a country?
    A. cultural tradition
    B. climate
    C. rainfall
    D. amount of pollution.

77. A woman's contribution to a country's economy is often not recognized because
    A. it has no economic value
    B. in most countries, men are the primary wage earners
    C. in most countries, women do not work for pay
    D. women's work is not counted in most countries.

78. Until recently, financial assistance for improving agriculture in Africa was given to
    A. men, who were assumed to be the farmers
    B. women, because they are the farmers of Africa
    C. women, because they needed more help
    D. women, because they dominate the men.

79. Special events that are planned to promote sustainable development include
    A. Earth Day
    B. Human Rights Day
    C. Independence Day
    D. all of the above.

80. Research on Small Business Loans to "Third World" women shows that such loans
    A. are not effective
    B. improve the family economy
    C. have little effect
    D. are difficult to administer because the women are not good at business matters.

Test Questions Answer Sheet

1. ____	21. ____	41. ____	61. ____
2. ____	22. ____	42. ____	62. ____
3. ____	23. ____	43. ____	63. ____
4. ____	24. ____	44. ____	64. ____
5. ____	25. ____	45. ____	65. ____
6. ____	26. ____	46. ____	66. ____
7. ____	27. ____	47. ____	67. ____
8. ____	28. ____	48. ____	68. ____
9. ____	29. ____	49. ____	69. ____
10. ____	30. ____	50. ____	70. ____
11. ____	31. ____	51. ____	71. ____
12. ____	32. ____	52. ____	72. ____
13. ____	33. ____	53. ____	73. ____
14. ____	34. ____	54. ____	74. ____
15. ____	35. ____	55. ____	75. ____
16. ____	36. ____	56. ____	76. ____
17. ____	37. ____	57. ____	77. ____
18. ____	38. ____	58. ____	78. ____
19. ____	39. ____	59. ____	79. ____
20. ____	40. ____	60. ____	80. ____

Answers to Questions

1.	C	21.	D	41.	D	61.	D
2.	D	22.	C	42.	B	62.	A
3.	C	23.	A	43.	A	63.	D
4.	D	24.	C	44.	B	64.	A
5.	C	25.	B	45.	A	65.	A
6.	D	26.	B	46.	A	66.	D
7.	B	27.	D	47.	C	67.	C
8.	D	28.	B	48.	C	68.	D
9.	D	29.	A	49.	A	69.	B
10.	B	30.	D	50.	A	70.	D
11.	D	31.	A	51.	D	71.	B
12.	D	32.	A	52.	B	72.	D
13.	C	33.	B	53.	A	73.	B
14.	C	34.	D	54.	B	74.	D
15.	B	35.	D	55.	B	75.	A
16.	A	36.	B	56.	C	76.	A
17.	D	37.	C	57.	A	77.	D
18.	D	38.	C	58.	A	78.	A
19.	D	39.	D	59.	B	79.	A
20.	D	40.	C	60.	B	80.	B

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The journey was too long for this young crane. He was very exhausted and could hardly keep going with his companions. At the moment he was about to fall into the sea, his friends got him and supported him until the end of the journey.

A Falling Young Crane

Yoriko Fujisawa
Age 10
Japan

Chapter 11

Readings
Introduction

The following readings are provided as further background for the teacher, although some of them may well appeal to students as well. Some of the questions being raised about the concept of sustainable development in the "real world" are included. Is sustainable development the impossible dream of having one's cake and eating it too? Or is it just another condition that industrialized countries are placing on foreign assistance and loans to industrializing nations? And what does intergenerational responsibility mean, anyway?

Alternative perspectives on the meaning of the shift in thinking from traditional economic development to sustainable development are included, especially perspectives from the southern hemisphere that are not usually found in U.S. mainstream media. The pragmatic value of demonstrating the kinds of resources available from a variety of the sources we have noted in Chapter 8 also played a hand in the selections. A couple of the readings reflect our own cultural bias toward problem solving and action, while we end with a vision of one approach to creating alternative futures.

A Teenager Makes a Difference

Most of the world's nations have agreed to halt production of chemicals that destroy Earth's protective ozone layer. This "new chapter in the history of international relations" was reached June 29th [1990] at the London ozone layer conference after 12 days of tough negotiations...

The conferees agreed to phase out ozone-destroying chloroflurocarbons—better known as CFCs—by the year 2000 and to speed the development of safer substitutes. For the first time, a limit was set on the use of two other ozone-depleting gases, methyl chloroform and carbon tetrachloride. Halons used in firefighting also will go in 10 years' time—except where they are irreplaceable.

However, some representatives—from 13 countries—felt the agreement didn't go far enough fast enough, and a few scientists thought that insufficient attention had been paid to recycling the chemicals to prevent their release into the atmosphere and to the potential dangers posed by CFC alternatives.

When the experts began their negotiations June 20th, a week before the high-level meeting, they had before them a text teeming with amendments and adjustments, including 190 square brackets like this [ ] around words, phrases, dates and numbers—all representing disagreements. They had made little headway in removing them when Susannah Begg, an Australian teenager representing the first youth delegation ever to attend an ozone conference, told them and their official delegations on June 27th: "We have been watching you. It has been at times fascinating, at times confusing, at time horrifying...We have had to keep reminding each other that what is actually being debated here is the future of the ozone layer. This debate has been largely guided by short-sighted commercial gains and national self-interest...Your pursuit of diplomatic compromises is compromising our future...Remember that we will inherit the consequences of your decisions. We will not sign the Montreal Protocol—you will. You will not bear the brunt of ozone depletion—we will. We demand that you think in the long term...Our fate," she said, "is in your square brackets." All 190 sets of brackets disappeared to make way for a stronger ozone treaty.

Source: *UNEP North America News*, United Nations Environment Programme, August 1990, Vol. 5, Number 4.

The United Nations and the Report of the World Commission on Environment and Development

The General Assembly devoted its session on October 19, 1987 to speeches about *Our Common Future*. The following are a few excerpts from the 23 presentations:

Prime Minister Mugabe of Zimbabwe found that

> *It [the WCED Report] mercilessly exposes the errors of our ways and, quite rightly, castigates us for foolishly acting the part of the biblical prodigal son, when we know that we do not have a wealthy and magnanimous father to run to after the fun is over. The development path we have chosen...is unsustainable.*
>
> *...In short, it is largely the current inequitable international economic system, which takes more out of the poor nations than it puts in, which is the major cause of environmental degradation in the developing world.*

Prime Minister Rajiv Gandhi of India thought that,

> *In principle, we would wish to give equal priority to development and conservation. In practice, there are many gaps in knowledge, many intangibles and unknown quantities. Experts disagree and assessments vary.*
>
> *Conservation is not a national task alone. Even as peace is indivisible, so is the world environment...All those affected by such transnational consequences of environmental damage must have an equal say in the resolution of problems. We must also keep the global commons and space free of environmental degradation.*

Tom McMillan, Canadian Minister of Environment's, remarks reflected his excitement about the recent meeting held in Montreal to write a Protocol to the Convention for the Protection of the Ozone Layer. The participating governments agreed to mechanisms and a time-table to control the chlorofluorocarbons which create the hole in the ozone layer above the Antarctic.

> *Earth's atmosphere, like the seas, is a global commons. Ultimately, critical atmospheric problems need to be addressed through international law—a law of the air. The Montreal Protocol is the first element of such a law. The willingness of the human family to forge a truly useful*

treaty on ozone demonstrates one thing: when the political will is mustered, it is possible to improve the odds in the risky game the world has been playing with its own future.

But, when the natural environment is sacrificed in pursuit of economic goals grounded exclusively in the present, we suffer in our own time....If poverty is pollution, as some have suggested, then pollution is also poverty.

What is required, in particular, is a change in the way people think—the most challenging change of all.

Ambassador Abdel Halim Badawi of Egypt in his laudatory comments cautioned that

our delegation cannot avoid voicing its concern about the increasing tendency to translate environmental issues into a new form of conditionality, which might be more harmful than helpful to preservation of the environment.

Philippines Ambassador, Sotero Laurel echoed this view when he added that

Environmental considerations, in their elaborate or sophisticated forms, could, therefore, aggravate present miseries. It is in this light that, while the proposals and recommendations of the Brundtland report, and the environmental perspective to the year 2000 and beyond are generally acceptable, we should all be wary of developments which link the access to bilateral and multilateral resources to the requirement that recipient countries undertake specific environmental measures.

Mr. Colemenares Finol of Venezuela also emphasized this point in saying:

The debtor and developing countries occupy the largest area of the world's territory. Pressed as they are to pay their debts, and faced with the growing poverty of most of their inhabitants, what investments can we expect those countries to allocate to preserving the environment and renewable natural resources? If pressure for strict compliance with debt payments continues, our creditors may succeed in recovering their loans, but they run the risk of bequeathing to their children a barren planet.

Source: *Implementing Sustainable Development: Moving Forward on The World Commission on Environment & Development Report:* ***Our Common Future,*** Sponsored by the United Nations Non-Governmental Liaison Service/New York and the NGO Committee on Development/New York, 1988.

Reflections on Sustainable Development

The concept of sustainable development is little more than a gigantic exercise in self-deception. It enables its proponents to avoid facing up to the fact that aggregate economic activity cannot possibly continue to increase if we are to have any hope of creating a world economy that will be sustainable for the very long term, in a healthy environment, with an adequate standard of living for all the world's inhabitants.

If development is meant to be, as I believe it is, synonymous with economic growth then sustainable development is a contradiction in terms. At whatever level of conservation and technology, economic activity involves resource extraction and destruction, the use of energy, and the emission of pollution in various forms. Environmental and resource constraints will make it impossible to provide a rising standard of living for ever-increasing human numbers.

We are faced with two monumental problems. One is the near certainty that world population will double or even triple before the end of the next century (assuming that the earth's resources and environment could withstand such growth). The other is how to lift the abysmally low standard of living of billions of poor people to a point where they can all be provided with at least the basic necessities of life—adequate food, shelter, clothing, education, medical care, recreation, clean air and water.

There is only one way out of this awful predicament, and that is to stabilize world population at a level that would reduce the impact of economic activity on the world's resources and environment. As Professor Herman E. Daly said some 16 years ago: "...a US-style, high mass consumption, growth-dominated economy for a world of four billion people is impossible...."

The evidence is overwhelming that even the present level of world economic activity cannot long be sustained, and must be dramatically reduced, not increased. Global warming, the thinning of the ozone layer, acid rain, deforestation, desertification, toxic waste disposal, all these and more support that assertion.

With a world of 10-15 billion people, there would appear to be only two possible results. Either we will succeed in destroying the life-support systems of our planet, and along with them most of the human race, or the standard of living of the world's inhabitants will be permanently reduced to the level of poverty now prevailing in the poorest of Third World countries.

Source: *Development Forum*, May-June 1990, p. 23, Donald Mann, President, Negative Population Growth, Inc.

Sustainable Development: Sustainable Concept

Few intellectual fields are more driven by fads than that of international development. Trend-paced ideas such as export promotion, import substitution, basic human needs or growth with equity have often become driving forces behind major development programs and determinants in the expenditure of millions of dollars in funds and countless hours of human labor. As each new theory encounters difficulty in the jump from theory to practice, and the daunting tasks of overcoming widespread poverty and raising living standards in low income communities remain unsolved, tough criticisms of development practitioners and development policies have been voiced.

"Development" has traditionally been understood in the West as the promotion of economic growth that leads to the creation of modern, industrial societies. The earliest post-World War II vision of development, heavily influenced by the Marshall Plan in Western Europe, led to the belief that foreign aid and investment, along with the creation or rebuilding of a modern infrastructure (roads, energy systems, modern industries) would eventually eliminate poverty and "backwardness" in a relatively short span of years. The model for all development assistance from the United States and Western Europe was their own industrial, technologically sophisticated economies.

Thus, since the late 1940s, various approaches to development have sought, with varying degrees of success, to raise country-wide indicators such as Gross National Product, or to improve individual welfare as measured through life expectancy or infant mortality rates. Beneath virtually all approaches to development from a Western perspective, whatever the particular focus, has been the belief that development means economic growth. Furthermore, the primary metaphors of development as commonly understood have not included any concern for the preservation or regeneration of environmental resources. On the contrary, environmental pollution and resource loss was often considered a necessary "price" to pay for progress.

It is this fundamental model of economic growth and emphasis on economic indicators as primary measurements of development that is presently being challenged by the concept of "sustainable development." This challenge is coming from an odd alliance of non-governmental development organizations (such as Oxfam America, Development GAP), traditional environmental or preservationist groups (World Resources, Environmental Defense Fund), and most notably a rapidly emerging number of community organizations in developing countries (Environmental Liaison Centre, Pesticide Action Network).

Sustainable development is a concept that merges two conflicting visions of social change. Proponents of this viewpoint would argue that development can

be accomplished without destroying our environment, and that resource regeneration can include improved livelihoods for low income people. The ideal of sustainability is rooted in environmental concerns, and is based on the belief that existing economic, particularly agricultural, practices cannot maintain or regenerate the earth's resource base for future generations. Development, whether capitalist or socialist, has traditionally been founded upon the acceptance of aggregate economic growth as the essential hallmark of progress. During the past decade it has become apparent that the predominant development models, in developed and developing countries, in capitalist and socialist oriented societies, run into conflict with the planet's ecological realities. The emphasis on satisfying economic and social needs through unchecked growth is no longer considered acceptable, and the destruction of the natural resource base is no longer considered a necessary trade off for improved human living conditions.

The shift in thinking was made apparent in the recent work of the World Commission on Environment and Development. The Commission, established in 1983 by the United Nations as an independent body to examine the connections between environment and development, proposed new forms of international programs that could create needed change. Half of the Commission's representatives were from developing countries, and others were from both Western and Eastern industrialized countries. The final report of the Commission presented a remarkable perspective from a mainstream body, as it linked environmental protection and development as complementary concerns. In its work, the Commission went far beyond the earlier effort of the 1970's Brandt Commission (which produced the *North-South* and *Common Crisis* reports on global poverty and development) in its linking of environmental sustainability with equitable development as necessarily inextricable goals. The World Commission report noted: "We have in the past been concerned about the impact of economic growth upon the environment. We are now forced to concern ourselves with the impacts of ecological stress—degradation of soils, water regimes, atmosphere, and forests—upon our economic prospects."

New perspectives on the importance of sustainable development are evident in two contemporary social changes. For the first time, some environmental groups in industrialized countries have moved beyond looking at ecological issues from a politically "neutral" viewpoint. Such groups as the Environmental Defense Fund and the Sierra Club no longer treat international environmental issues in ways that appear to blame poor people for the destruction of their local resources. These organizations have become cognizant of the economic inequalities that drive poor people to undermine their natural resources and that enable the wealthy and politically powerful to exploit local resources. Environmental organizations, such as World Resources Institute and the Environmental Defense Fund, are making common cause with popular organizations in low income countries. They are challenging the loan policies of international

development organizations, such as the World Bank and Inter-American Development Bank, arguing for a fundamental rethinking of funding priorities and practices. They are also questioning the practices of international corporations that are involved in depleting local resources.

The second significant social change is reflected in the partnership between environmental groups and community organizations with regards to the recognition in low income countries that "ecology" is not a luxury issue for the rich. There is an awareness that the very basis for any future growth is being undermined through the disappearance of natural resources and the pollution of soil and water. A good example of this sharing is the Environmental Liaison Centre (Nairobi) which publishes reports from community groups throughout the world, both on development and environmental concerns. The information compiled and distributed through such groups as ELC shows that development is now inherently connected with the question of sustaining or even regenerating the natural resource base. Organizations in developing countries are acting both to protect existing resources and to restructure development practices.

While presenting a vision of what sustainable development means in practice is not easy, there are a growing number of ways in which people in developing countries are taking action for the protection of natural resources and their own internally modeled development. In Brazil, for example, there is increasing indigenous opposition to the destruction of the Amazon forest and other resources. Rubber tappers, Indian groups, small farmers and labor unions are working to protect the Amazon against rapid "development" by large cattle farms, government projects and international investors (including those from the U.S., Western Europe and now Japan). They have been joined by environmental organizations internationally, although this becomes a delicate issue with concern for Brazil's sovereignty sometimes being used to justify the government's willingness to support destructive practices.

In India, organizations such as the Chipko Movement have emerged to protect the country's remaining forests. The active resistance to deforestation was summed up in the expression "hug a tree," as poor people's groups placed themselves between machinery and the forests. In a dramatic and tragic way, the Bhopal Union Carbide disaster has alerted groups in India and other countries of the dangers inherent in rapid industrialization which proceeds without being carefully monitored by people in the local community. It also illustrated the relationship between power and the ability to protect one's environment.

This relationship is apparent in many cases involving environmental degradation, as the political and economic relations in a society help determine development strategies. This is exemplified in such apparently consensus issues as agro-forestry projects. A widespread concern over the loss of trees, both in tropical zones and semi-arid regions, has led to numerous projects supporting widespread reforestation in developing countries. In reviewing

forestry projects, however, there are many cases where goals were not achieved. Many projects in such semi-arid regions as the Sahel in West Africa were targeted for large-scale fuel wood production or the promotion of trees that were not locally integrated into existing farming and consumption patterns. Additionally, the projects lacked involvement of community people in planning and managing the forests, and the products were not necessarily of immediate value to the local community.

Not all projects, however, have turned out poorly as a recent study by the Environmental Policy Institute and National Wildlife Federation have indicated. This study examined twenty projects and drew important conclusions from the successes and failures of these ventures. The projects ranged from forestry programs in Haiti and Java to more efficient stoves in Kenya and integrated pest management in West Africa. The specific examples from this study *(Bankrolling Success)* are indicative of what is necessary for effective sustainable development efforts. These include encouraging local solutions to local problems, establishing creative partnerships between local organizations and development agencies, utilizing the knowledge that low income people have of their own environment, and challenging the practices of governments' destruction rather than sustainable development.

Issues of resource degradation and the search for sustainable development are not limited to the new movements for environmental protection in developing countries. Sustainable development is not just a problem for developing countries. The present patterns of consumption and resource degradation in developed countries also comes into question. Problems such as acid rain and the greenhouse effect are results of affluent societies, not poverty-driven resource destruction. This means that sustainable development as a concept is of equal importance for our own country and other industrialized states, as well as for developing societies. Perhaps part of the quest for sustainable development models is the need for people in industrial societies to learn from the experience and practices of those whom we have long considered "the poor." This reversal would help in removing knowledge barriers and in understanding how sustainable development is a question of both political-economy and environmental values.

Source: Stephen Commins, *Global Pages,* Jan./Mar. 1989, Vol. 7, No. 1, Immaculate Heart College Center, 425 Shatto Place, 4th floor, Los Angeles, CA 90020.

South Commission: 'We're on our own'

The South Commission has published its long-awaited study [*The Challenge to the South,* 1990] that charts a course for self-reliant and sustainable growth for the developing world.

The authors, all Third World leaders, argue that solutions to the precarious position of developing countries lie in radical reforms of institutions, economic relations and politics—in short, an overhaul of the prevailing attitudes in both domestic and international relations.

A comprehensive analysis of the missed opportunities of the past, the report also provides an overview of possible strategies for the future, citing four key goals for the Third World: putting people at the centre of the development process, promoting greater self-reliance within countries, enhancing South-South cooperation in all aspects of economic and social development and improving relations with the North.

The South Commission, chaired by former Tanzanian president Julius Nyerere, was formed at the Non-Aligned Movement meeting in Zimbabwe in 1986 to undertake the study. It consists of 27 Third World leaders including bankers, economists, intellectuals, and religious and political figures from Africa, Latin America and Asia.

Why the lost decade?

The report attributes the current deterioration of social and governmental institutions and widespread political instability to the current economic crisis. During the 1980s, it argues, "governments and political systems found themselves rejected and their legitimacy challenged for their inability to provide basic services and goods to their populations."

The Commission criticizes the way in which Southern countries have copied Northern economic models in their attempts to eradicate hunger, ignorance and illness, without taking their specific circumstances into account. Nevertheless, "fast and sustained economic growth is an inescapable imperative for the South." But in order for people-centered development to occur, that growth "has to be oriented so as to raise the income and productivity of the poor and to promote a sustainable use of the scarce natural resources and the environment." The report criticizes the North for failing to intervene when Southern nations were hit by high foreign debt and low export prices. But it also cites domestic factors which could have forestalled the decline including a better balance between investment and consumption, more equitable distribution of goods, greater decentralization and more popular participation in the development process.

Yet maybe the biggest casualty of the "lost decade" of the 1980s, states the report, was the undermining of South-South solidarity. To rectify this it calls

for the creation of a "South Secretariat" to coordinate South-South cooperation as well as to present a united front in negotiations with the North. It also advocates regular meetings of heads of state from the South, and a commitment from the North to support such efforts in the interests of international peace and security.

Southern fears

While the Commission recognizes the South's responsibility to protect the environment, it notes that "the way the North is attempting to define [environmental] problems introduces an element of potential North-South conflict that should be avoided." Environmental issues cannot be used as a pretext to limit national sovereignty or development priorities, it says, adding that "the North has already used a great quantity of the planet's ecological capital" for its own development, and must now restrict its appetite.

Furthermore, the authors emphasize that ecological disasters stem not only from poverty and financial exploitation but above all from development and consumption models developed in the North—a sort of negative cultural transfer. Until the South can chart its own path to sustainable development it will continue to replicate the mistakes of industrialized countries.

"The North is very powerful, but also very arrogant," commented Julius Nyerere on behalf of the Commission members. "It speaks about democracy and human rights and claims to be the champion of these universal principles, but there is no democracy in international relations and it pays little attention to the most fundamental human right—the right to live."

Reflecting Southern fears, the report warns that the improvement in East-West relations could produce brutal forms of extended political domination by the industrialized nations over the developing world.

"While the tensions between the superpowers are being reduced, a situation could emerge in which they believe that they can operate more freely to promote what they consider to be their essential interests in areas they consider to be strategic," without considering the needs and aspirations of the people of the South.

It would be a mistake to rely on support and models from the developed world, but this does not mean breaking North-South ties, says the Commission. Rather, there is a need to change North-South relations from exploitation and subordination to mutual benefit and partnership. However, to achieve this objective it will be essential to fulfill the goal of solidarity in the South first.

Excerpted from: Luis Cordova and Alejandro Kirk, *Development Forum,* September-October 1990, p. 8.
The Challenge to the South: The Report of the South Commission is available from Oxford University Press.

Valdez Principles

Statement of Intent

With these Principles, The Coalition for Environmentally Responsible Economies, or CERES project of the Social Investment Forum, sets forth broad standards for evaluating activities by corporations that directly or indirectly impact the Earth's biosphere. The CERES Project has created the Valdez Principles to help investors make informed decisions around environmental issues. As representatives of the investment and environmental communities we are asking corporations to join with us by subscribing to these Principles.

Recognizing the complexity of the issues contained in these broad Principles, CERES has attempted to define the Principles as a long-term process rather than a static statement. CERES members hope that signatory companies will work with us on the elaboration of the specific requirements of the Principles. Our intent is to create a voluntary mechanism of corporate self-governance that will maintain business practices consistent with the goals of sustaining our fragile environment for future generations, within a culture that respects all life and honors its interdependence.

We ask for a long term commitment to the process of compliance with these Principles, and an additional commitment of assistance and cooperation in the further development of specific standards derived of these general principles.

VALDEZ PRINCIPLES

By adopting these principles, we publicly affirm our belief that corporations and their shareholders have a direct responsibility for the environment. We believe that corporations must conduct their business as responsible stewards of the environment and seek profits only in a manner that leaves the Earth healthy and safe. We believe that corporations must not compromise the ability of future generations to sustain their needs.

We recognize this to be a long term commitment to update our practices continually in light of advances in technology and new understandings in health and environmental science. We intend to make consistent, measurable progress in implementing these principles and to apply them wherever we operate throughout the world.

1. **Protection of the Biosphere**

   We will minimize and strive to eliminate the release of any pollutant that may cause environmental damage to air, water, or earth or its inhabitants. We will safeguard habitats in rivers, lakes, wetlands, coastal zones and oceans and will minimize contributing to global warming, depletion of the ozone layer, acid rain or smog.

2. **Sustainable Use of Natural Resources**

   We will make sustainable use of renewable natural resouces, such as water, soils and forests. We will conserve nonrenewable natural resouces through efficient use and careful planning. We will protect wildlife habitat, open spaces and wilderness, while preserving biodiversity.

3. **Reduction and Disposal of Waste**

   We will minimize the creation of waste, especially hazardous waste, and wherever possible recycle materials. We will dispose of all wastes through safe and responsible methods.

4. **Wise Use of Energy**

   We will make every effort to use environmentally safe and sustainable energy sources to meet our needs. We will invest in improved energy efficiency and conservation in our operations. We will maximize the energy efficiency of products we produce or sell.

5. **Risk Reduction**

   We will minimize the environmental, health and safety risks to our employees and the communities in which we operate by employing safe technologies and operating procedures and by being constantly prepared for emergencies.

6. **Marketing of Safe Products and Services**

   We will sell products or services that minimize adverse environmental impacts and that are safe as consumers commonly use them. We will inform consumers of the environmental impacts of our products or services.

7. **Damage Compensation**

We will take responsibility for any harm we cause to the environment by making every effort to fully restore the environment and to compensate those persons who are adversely affected.

8. **Disclosure**

We will disclose to our employees and to the public incidents relating to our operations that cause environmental harm or pose health or safety hazards. We will disclose potential environmental, health or safety hazards posed by our operations, and we will not take any action against employees who report any condition that creates a danger to the environment or poses health and safety hazards.

9. **Environmental Directors and Managers**

At least one member of the Board of Directors will be a person qualified to represent environmental interests. We will commit management resources to implement these Principles, including the funding of an office of vice president for environmental affairs or an equivalent executive position, reporting directly to the CEO, to monitor and report upon our implementation efforts.

10. **Assessment and Annual Audit**

We will conduct and make public an annual self-evaluation of our progress in implementing these Principles and in complying with all applicable laws and regulations throughout our worldwide operations. We will work toward the timely creation of independent environmental audit procedures which we will complete annually and make available to the public.

For further information on these Principles, contact CERES, 717 Atlantic Avenue, Boston, MA 02111, (617-451-0927).

Intergenerational Responsibility

The concept of sustainability brings children to the forefront of environment/development considerations. The children alive today are the first representatives of all future generations. If this adult generation cannot meet the needs of today's children then there is little chance of our acting to meet the needs of generations yet unborn.

The aim of sustainable development also raises the issue of a new type of fairness and equality rarely considered previously: intergenerational equity. This must now take its place among concerns for equality between races, sexes and nations. Achieving that equality is proving difficult enough; equity between generations is a more difficult goal. Unborn generations are not present to speak for themselves, so sustainable development requires that this generation accept responsibility for future generations. Making this goal a reality may be the foremost challenge facing policy makers in the closing years of the 20th century, and beyond.

In the past, it was assumed that succeeding generations would inherit a planet very similar to the one inhabited by the current generation, with perhaps new technology to make life safer, healthier and easier.

This is no longer a justifiable assumption. The present generation is the first to have the power to radically alter planetary ecosystems, to present its offspring with a planet very different from the one it inherited—changed atmosphere, soils, water regimes, vegetation.

The United Nations proposes three basic principles of intergenerational equity:

- Each generation is required to conserve the natural and cultural resource base, so that it does not unduly restrict the options of future generations.
- Each generation is required to maintain the quality of the planet so that it is passed on in no worse condition than it was received.
- Each generation should provide its members with equitable access to the legacy from past generations.

Thus justice between generations involves not only duties, but also rights, not only between generations, but also between members of the same generation. The establishment of such rights is a daunting political task. The 1987 report of the World Commission on Environment and Development suggests a beginning might be "the designation of an ombudsman to represent the interests and the rights of present and future generations, and act as an environmental watchdog."...

The achievement of environmentally sound and sustainable development will require actions by citizens as well as UN agencies and governments. Justice for children and for all future generations can only be gained through a global alliance.

If the many threats to the environment and the future are to be met effectively they must be met by the present adult generation; many of the key decisions and actions must be made in the 1990s.

The technology is largely in place, and as more societies become more open, many more people take part in decision making. This offers an historic opportunity, since environmentally sound and sustainble development cannot be achieved without broad public participation and freedom of information.

The state of our children and the state of our environment—and what we do now for the future of both—will more than anything reveal the state of our civilization and the prospects of our future as a species.

Excerpted from: UNICEF/UNEP, Summary, *The State of the Environment 1990: Children and the Environment.*

Visions of Sustainable Development

As we push ourselves to grasp or articulate or invent visions of a sustainable future, there is a very hard-to-discern line between two dangers. We can simply turn it into a wish-fulfillment discussion (gosh, I'd like there to be a world with no war and good food for everybody and meaningful lifestyles, and so forth), which risks detaching from the institutions we are going to use, the forms of persuasion turning into coercion we are going to use, and so on. The risk on the other side, of course, is that we remain with a largely technocratic discussion of such questions as how to feed x numbers of people and how to clean up these emissions in the environment. The middle ground, the population, technology, and environment stage, provides some talking points for the constraints and opportunities around which an imaginative but nonetheless disciplined discussion of visions of possible futures might be held.

The canonical definition of sustainable development is that of the Brundtland Commission: paths of social, economic, and political change that manage to meet the needs of the present without compromising the ability of future generations to meet their own needs. Virtually everywhere one goes around the world these days one finds the Commission's report, *Our Common Future,* looked at with great respect and interest, and the concept of sustainable development said to be a central issue for that country's future. Of course, an infinite number of meanings are shoveled in under those nice little words. Let me then begin to set the stage that can help us put meanings on those words.

Syndromes of Complex Interaction

Whatever else it may be, the stage is one on which change is going on extremely rapidly. There are two times as many people on the stage as there were in 1950. World trade has increased 20-fold over the last hundred years. Human energy use has gone up maybe a 100-fold. You can tally it up any way you want to, but the bottom line is that the magnitude of changing human activity has forced an increasing scale and complexity of interactions between people and technologies and the environment.

If you think of what we were dealing with 20 years ago when somebody said, "Ah, you have an environmental problem to fix," what they meant was generally a local incident of pollution—a smokestack that was bellowing forth too much soot or a factory that was dumping too much junk in the river. And that might have been a very difficult thing to fix. There was power politics to contend with, along with hard chemistry and physics. But at least you had in the same jurisdiction the smokestack, the problem, and the political and institutional ability to fix it. What we've got today is, of course, not just that sort of situation. It persists, but the environmental problem has expanded to include a whole host

of issues that involve multiple nations and the globe as a whole. Think of the way the acid rain, acid deposition debate is playing out between Candada and the U.S. and countries in Eastern and Western Europe. If we change from a local to a global perspective, we also change the nature of our problems in time. When I was in graduate school, the focus was largely on acute episodes of pollution. If you plugged that smokestack, the impact went away rather rapidly. In the case of a eutrophied lake, five years after you stopped pouring detergents into it, you very often had a lake that was self-cleaned. Now we're once again moving upscale. We have chronic issues of hazardous waste disposal, nuclear radiation, deforestation and consequent soil loss—situations where even if we stopped the insults today, it would be decades or even centuries before, under the best of possible circumstances, the environment would show marked improvement. Even worse, in the cases of some of the waste disposals, they're never going to show improvement; they're going to be there forever. The issue is particularly serious from a management point of view, because we have to ask people today—individuals, corporate executives, politicians—to make sacrifices, often large ones, in the interest of returns that are (1) uncertain and (2) accrue not to them but to people generations hence.

We're also moved from relatively straightforward cause and effect issues of ecological preservation versus economic growth to much more troubling things such as the greenhouse effect. You find very complicated linkages between much needed economic growth and threats to the atmosphere, perhaps through burning forests in order to plant crops, perhaps through getting rural electrification for the first time in areas of the Third World, pouring things into the atmosphere that are going to have feedback that will threaten to undermine development in the future. Now that isn't an ecology-versus-economy issue; it isn't preservation versus growth; it is a complicated intertwining of the two that requires a dynamic juggling act, not a solution in favor of one side or the other. We've got what some people describe as syndromes of complex interaction between people and the world they live in...

We the people of the earth, individually and en masse, are going to have to evolve action agendas that somehow reflect shared perceptions of the issues and the choices in front of us. But if these choices are to reflect anything more than parochial preoccupation with specific problems, we shall have to invent for ourselves, and even more problematically for our children, long-term global visions of the world that we seek to manage. We need visions that are not just an individual product of one person's imagination but a joint product that we all have as a society.

Moving on from Conventional Wisdom

I want to sketch very briefly some efforts at "bootstrapping" with respect to visions of the future, efforts that groups I've been associated with have made. My goal is not to go through all the details, but to suggest ways in which you as

individuals and groups might add your "bootstrapping fix" to the conventional wisdom.

The reason for trying to get away from the conventional wisdom is nicely captured by a story in W.H. McNeil. Here is one of the few people who have thought systematically about global-scale, long-term change, have thought sympathetically as a biographer about the world from the perspective of individuals in it that make a difference, and have come out with a description of the roles of long-term trends and the element of surprise. He says, "I believe that historians' preoccupation with catastrophe might be useful to economists and others if they would care to listen. Extreme cases, breakdowns, abrupt interruptions of established market relations, these are not the staples of economic theory and are, I believe, usually dismissed by statistically-minded analysts of the norm and its fluctuations. The human societies are a species of equilibrium, and equilibria are liable to catastrophe when under special limiting conditions small input may produce very large, often unperceived, and frequently irreversible outcomes."

There are efforts now brewing to set forth a theory of surprise. We need to get the numbers people together with the narrative people. Perhaps our most useful visions of history stem from the point of view of narratives of particular individual lives, episodes, events that talk about history as it is lived. And yet the narrative treatments of surprise-rich futures have been mainly limited to science fiction literature, where they have come forth with some very interesting things but very rarely have conceived them as subject to some of the kinds of constraints and disciplines implicit in the flawed but useful conventional wisdom. What we've tried to do is find ways of living with this numbers versus narrative tension, of really holding the number crunchers and the sympathetic people together in exercises to invent alternative futures.

Defining the World of 2075

The most exciting one of these efforts I've been engaged in was in a little hunting lodge north of Stockholm. It was in the middle of the winter—nobody left the workshop! A broad group of historians, technologists, religious leaders, and a few number punchers, about 25 people were together for a week with roughly the conventional wisdom histories I've laid out for you as a starting point. Their charge was to define as a group a set of things for the world in 2075 that would be so different from conventional wisdom inputs that they would demand explanation—not so different and implausible that they simply weren't interesting at all.

So they defined the world and tried to say what was happening in the world that they defined, with of course some ruffles and flourishes. And then we broke them into groups and had them work backwards writing the future history of the world from 1975 up to the surprising inputs they had defined for themselves for 2075. They only stricture was that they would come back and compare results; and points would go to the small group that had to resort to the fewest

miracles on the path from 1975 to 2075. Reticent historians blossomed forth, creative beyond their wildest dreams. Number crunchers became weary. Professors of Old Icelandic began picking up calculators and doing calculations and ratios. It was the most interesting exercise I've ever been involved in.

20 Billion People and a New Center of Creativity

The exercise produced several visions of a kinder, gentler, hardly more populated planet. More surprisingly, it also created a 20 billion person world. The participants did this by shifting the center of the world's intellectual and economic activity from Europe and America to South Asia, where they said it had actually been for most of the history of the planet anyway (so why not get it back there?). Europe went into a noble decline, where people came to visit the castles...

They came up with a vision of the good life which did not involve vast material consumption but focused on child welfare, care of the elderly, women's rights, and the like. Now how you're going to do that in India and Bangladesh is a big issue, but they did it. Even their great calamity of the period—the loss of most of Bangladesh through flooding from the greenhouse effect—served more to stimulate innovation than to put a dent in that 20 billion person world.

Where do you put all the people? You put a lot of them in Siberia. How do you get them to Siberia? (By the way, this exercise was conducted in 1986.) You get them there by having ethnic tensions in the Soviet Union become rather intense and coalesce around a new charismatic figure. Finally the ethnic tensions become so great that this ethnic leader, who happens to be from the West Asian Republic, has to deal with the Chinese. If the Chinese would militarily make grunts and groans about the Soviets' using much force to suppress the ethnic movements, then the Soviets would open Siberia to the Chinese as an outlet for their expansion...

We all know that some of the highest population growth rates ever have been in frontier expansion areas. Getting that frontier expansion in a warming Siberia, and then an expansion into Central Africa, where they cured the tsetse fly problem, gave an outlet for the population growth, and they managed to move the world along with no big miracles. They got their big growth scenario by going other routes.

My point is merely to point to the creativity that emerges from taking people through some basic numbers and then moving on to some considerations of deep social issues and communally shared visions of a defensible future. People began to focus on those visions as different ways of thinking about the next century. And they did it in a sufficiently structured and sufficiently innovative way to pile up a list of half a dozen not impossible world histories by the time they were done. It was a tremendously stimulating experience for those involved to realize how little things could accumulate to make a big difference.

Some natural scientists have taken analagous looks at environmental change. For example, what if we try to jump ahead and not have the ozone

problem happen to us? They have discovered, much to their amazement, that you can think systematically and creatively about not impossible, radical excursions on the part of the environment resulting from small changes. Pushed to think this way about odd interactions that might occur in the system, we have begun to shape an intermediate ground between simple extrapolations of what we know and science fiction scare stories totally disconnected from what scientific or technical scholars think about. That I believe has been a very positive contribution. We are slowly building up a sort of ad hoc set of rules of thumb for exploring possible surprises in the future.

Becoming Better Managers

How can we learn to be better managers, to realize sustainable visions of the future? Curiously, one systematic technique has gone back to the experience of the military war games invented in the mid-1950's. Analysts of the period found that none of the theories of political strategy of the day were capable of explaining how Eastern Europe sorted itself out after the Second World War. They had to find a way to combine the numbers with the narrative, with the gut feel people had for crucial moments and contingent events, always restrained, however, by long-term balance of power notions.

A number of experiments are now trying to apply similar approaches to problems of environmental management. It's happening on a global scale in looking at possible ways the greenhouse effect might unroll over the next century. It's happening on a continental scale in Europe in playing out different ways to handle the forest die-back problem. It's happening on a local scale in New England, where several Vermont towns have been doing this sort of gaming to explore various ways they might balance off their desires to have economic growth, environmental protection, and preservation of the kind of Vermont landscape they like. [Because of space limitations and inability to show the essential pictures, we have omitted Dr. Clark's account of the "Whither Sweden Debate." Landscape artists portrayed a familiar area on the country's southwest coast as it might have been many centuries ago and at various times up to the present, and then depicted alternative futures for this scene as of the year 2015. The artists' contribution, along with the development and discussion of various planning alternatives, helped the nation to make decisions about its future, including the question of whether its energy future should be nuclear or solar.]

Excerpted from: William C. Clark, *The Egg: A Journal of Eco-Justice,* Vol. 10 No. 2, Summer, 1990.

William C. Clark is a senior research associate at the Kennedy School of Government, Harvard University, a member of the U.S. National Academy of Sciences Committee on Global Change, and editor of *Environment* magazine.

BEST COPY AVAILABLE

Quiet Night

Xia Fei
Age 6
People's Republic of China

Chapter 12

Sustainable Development
Glossary

We offer the following definitions as representative of how the "mainstream" of the "development" field uses these terms. Many of the concepts, however, are hotly contested by persons operating from diverse worldviews. Thus you are encouraged to be aware of this diversity as you use this resource.

We are extremely grateful to The Common Heritage Programme in Ottawa, Canada for giving permission to use *The E.D.I.T. Glossary: Environment and Development Terms* as the base of this glossary. Approximately three-fourths of the items have been taken from that excellent resource, which is part of a series of learning resources on contemporary environmental, social and economic issues from an international—and a Canadian—perspective.

We have also benefitted from United Nations publications and the following materials, which are listed in Chapter 8: *Ending Hunger: An Idea Whose Time Has Come; Overcoming Isolation Through Development Education; and What Is a Resource?,* Stanford Program on International and Cross-Cultural Education.

An asterisk (*) indicates the term is part of the Analytical Framework for Sustainable Development in Chapter 5.

acid rain • wet and dry deposition of sulphur and nitrogen compounds from the atmosphere, believed to be the cause of severe damage to both natural and man-made environments. Acid rain is primarily the result of by-products from the burning of high sulphur coal, and may occur up to 1000 km away from the site of burning.

agrarian reform • a term given to the redistribution of agricultural land among farmers. Large estates and plantations are divided into small farms so that more people own land. Agrarian reform to distribute land more equally was recognized as a "critical component" in the declaration of the World Conference on Agrarian Reform and Rural Development, 1979.

alternative energy • energy from the sun, wind, water, farm and forest products, which represents an alternative to fossil fuels. The term is roughly synonymous with renewable energy but is often reserved for energy sources which are also environmentally sound. Falling water, for example, is a renewable energy source, but large-scale hydro projects can have disastrous effects on the environment.

appropriate technology • production methods in agriculture and industry suitable to local resources, the skills of the available humanpower, the amount of capital and the degree of development of the individual country concerned. In developing countries this can mean either labor-intensive and moderately priced technology or the most sophisticated systems and technology available, depending on what is "appropriate."

assimilation • the process by which a particular culture becomes absorbed into the larger society and loses its distinctive characteristics.

balance of payments • the record of all the economic transactions between one country and the rest of the world during a given period (usually one year). The balance of payments shows the relationship between one country's total payments to all other countries and its total receipts from them.

balance of trade • the difference between the value of the goods that a nation exports and the value of the goods that it imports; the relationship between a country's payment for imports and its receipts from exports. When a country has an export surplus, its balance is favorable; when it has an export deficit its balance is unfavorable.

barriers/trade barriers • any obstacles between the would-be buyer and the product or commodity. A trade barrier is a restraint (often in form of tariffs or quotas) on the free exchange of goods and services between countries. These obstacles are imposed by a country which wishes to protect domestic producers against foreign competition, reduce domestic unemployment, or improve its balance of payments position.

basic human needs • a strategy for focusing development aid on programs which deal most closely with the poorest people. Such programs include village clinics, land reform, primary and craft schools, etc.

***biosphere** • the thin layer on the earth's surface in which life occurs, including oceans, land and the lower atmosphere.

brain drain • the emigration of trained professionals and technicians, from one country to another, to take advantage of better financial opportunities and superior facilities in which to work.

capital-intensive industry • forms of production in which considerable use is made of capital investment per person employed. In a capital-intensive industry capital charges account for perhaps more than 50% of total production costs. The chemical industry, in which the value of capital equipment per worker is very high, is an example of a capital-intensive industry. (For comparison, see Labor-intensive.)

capitalism • an economic system in which the ownership of land and natural wealth, the production, distribution, and exchange of goods, and the operation of the system itself, are affected by private enterprise and control under competitive conditions.

cash crop • acrop which is grown primarily for export purposes, and which brings cash into a country, such as jute in Bangladesh and coffee in Colombia.

centrally planned economy • an economic system in which decisions on production, investment, and distribution are made by the state or a central government agency. A centrally planned economy is in contrast to the economic system of free enterprise.

clear-cut • to harvest all the trees in a given area, without regard to specific needs or environmental consequences.

commodity • generally understood to mean unprocessed minerals or agricultural products. Can mean any article produced for sale.

common heritage of mankind • a term used in the Law of the Sea (UNCLOS) agreements to describe the idea that some parts of the earth, especially the oceans, which are not owned by any nation, belong to all the earth's people.

commons • the idea that some parts of the earth, for example the oceans, are not owned by any one nation, but belong to all the earth's people.

comparative advantage • the ability to provide a certain product at an especially low cost, because of economic advantages such as cheap labor, low energy costs, or proximity to a resource. In economic terms, it may be to that country's advantage to concentrate its efforts on producing that product.

conservation • the careful use and management by humans of natural resources including soil, forests, air, water, and wildlife; the careful, non-wasteful use of resources.

debt service • the amount of funds set aside for the payment of interest and amortization charges of a debt.

deforestation • the clearing of forests to the point where future forest growth is affected.

dependency analysis • focuses on the way goods are exchanged; imperialism has worked to the advantage of the rich nations and to the disadvantage of the poor, systematically underdeveloping the Third World to make it serve the interests and needs of the rich nations, rather than its own.

desertification • the process whereby an area with trees or other vegetation becomes desert. Desertification is an increasing global problem and is often the result of overgrazing or deforestation or inappropriate use of land.

develop • to cause to grow gradually in some way; to cause to become gradually fuller, larger, better etc.

developing nations or countries • those nations, many of them former colonies, which are still in the process of developing their resources and economies; nonindustrialized nations. Most developing countries are in Africa, Latin America and Asia.

development • the process of improving the quality of human lives in many areas, including: income and consumption levels; social, political, and economic institutions; and freedom of choice. The term is sometimes used narrowly to mean economic growth.

***division of labor** • a specific task assigned to each worker in agricultural or industrial production which enables a given item to be produced more efficiently and at a lower cost.

***economy** • the way the people of a culture or country make their living; how they make, use, exchange and sell goods and services; the total of imports and exports that affects the income of a country.

ecosystem • the balance between all the elements in a natural environment; water, sun, plants, insects and animal life interact to create an ecosystem.

endangered species • any species of fauna or flora whose existence is threatened with immediate extinction through all or a significant portion of its range, owing to the action of man.

energy • the capacity to do work and to overcome resistance (i.e., to move) manifested in nature in various forms and in almost all cases ultimately derived from the sun. The main concern is with energy sources that is, the various forms of energy which humans use to make work easier. See primary and secondary energy.

***equity** • justice; impartiality; giving to each person their due; the principle of fairness and justice.

ethnocentrism • judging others by one's own values, without regard for the others' values and standards.

external debt service • interest charges owed to other governments, international and regional organizations and private corporations, usually banks. In some developing countries, debt service alone absorbs over 50 percent of foreign exchange receipts, usually forcing still further borrowing.

First World • the countries of western Europe, the United States, Canada, Australia, New Zealand and Japan, which have developed market economies.

fiscal policy • the variation in spending and taxation decided by government finance departments. These decisions generally result in the speeding up or slowing down of economic activity.

foreign exchange • the system whereby one currency is exchanged for another. Foreign exchange is required in trade since no single currency is used by all countries. The demand for foreign exchange arises from international debts through trade, foreign investment, travel abroad, etc. The supply of foreign exchange comes from payments for exports, the sale of loans to foreign countries, etc.

Fourth World • economically troubled states, which have been so classified because they show no promise for industrialization.

free enterprise • an economic system in which production is largely determined by consumers through their demand.

free-market economy • an economy in which the decisions of individual households and firms (as distinct from the central authorities) exert the major influence over the allocation of resources.

fundamentalism • the insistence on and adherence to the fundamental or basic tenets of a religion or system of beliefs; usually characterized by rejection of "modern" i.e., "worldly" values; these fundamental beliefs and/or values have a distinct influence on the economic, social, and political life of believers, including states.

futures • contracts made in a "futures market" for the purchase or sale of commodities on a specified future date. Many commodity exchanges, such as wool, cotton, and wheat, have established futures markets which permit manufacturers and traders to hedge against changes in price of the raw materials they use or deal in.

***gender roles** • economic, social, political functions attributed to males or females in a particular society.

genocide • the deliberate extermination of an entire race, tribe, or distinct group of people.

***governmental systems** • a political ideology and established system of political administration implemented by a government.

greenhouse effect • the name given to the theory of gradual global warming (between 1.5 degrees C and 4.5 degrees C by the year 2030) owing to atmospheric gases which allow short-wave sunlight to enter the atmosphere, but absorb much of the long-wave radiation emitted by the earth's surface. Among the greenhouse gases are: carbon dioxide, water vapor, methane, nitrous oxide and chlorofluorocarbons.

Green Revolution • an upsurge in grain production in a number of countries in the 1960s and early 1970s, resulting from new crop varieties and greater use of chemical fertilizers.

Gross National Product (GNP) • the total value of all goods and services produced in a nation, usually measured within one year.

Group of 77 • an informal organization of Third World nations within the United Nations. Now with nearly 120 members, the Group of 77 was formed in 1964 to present a series of economic demands to the first United Nations Conference on Trade and Development (UNCTAD).

hazardous wastes • wastes containing any substance which may present danger to: 1) the life and health of living organisms when released into the environment; 2)

the safety of humans or equipment in disposal plants if incorrectly handled. Some substances may be hazardous on more than one count. The uncontrolled disposal of hazardous wastes can result in contamination of surface streams and underground waters to an extent that the waters are dangerous to plant and animal life.

Human Development Index (HDI) • A measure of quality of life that combines life expectancy, literacy and purchasing power. The HDI was created in 1990 by the United Nations Development Programme to supplement existing measures, especially per capita gross national product (GNP). In 1990, Japan ranks at the top, 130th, with an HDI of .996, the United States ranks 112th with an HDI of .961, while Niger ranks lowest, 1st with an HDI of .116.

improved access to markets • the removal of tariff and nontariff barriers to allow movement of goods from one country to another.

indigenous societies • people who were first to adapt a way of life to a particular environment; native peoples.

industrialized • often used to refer to those countries whose gross national product comes primarily from industrial activity, not agriculture.

inflation • a rise in the average level of all prices.

intercropping • the process of planting a variety of crops in a single field—sometimes along with trees—in order to increase crop productivity. The technique works particularly well in tropical moist forest areas, where it duplicates the diversity and complex interdependence of the TMF ecosystem.

Infant Mortality Rate • The number of deaths among children under age one per thousand live births.

labor-intensive • forms of production which require a large proportion of labor investment to capital or land investment. Handicraft, service industries and many agricultural activities—e.g., coffee, tea, and jute production—are labor-intensive because they require work which is better done by humans.

landfill • a land waste disposal site where industrial or other wastes are deposited in the ground and covered, intermittently, with a layer of earth to reduce pollution problems. A secure landfill has restricted access, is continually monitored and is located above geological strata that should prevent any wastes from being leached into ground water.

landlocked developing countries • inland countries with special transportation difficulties because of lack of access to the sea.

Least Developed Countries (LDCs) • the concept of Least Developed Countries was recognized at UNCTAD II (1968) and in the 1971 UN General Assembly. The 42 LDCs are defined as countries having particularly severe long-term constraints on economic development. Criteria for LDC is based on a per capita GNP income of $400 or below, a share of manufacturing of 15 percent or less of GNP, and 20 per cent or less of literate persons aged 15 or more.

Life Expectancy at Birth • The number of years an infant born in a particular year can be expected to live, given current conditions of mortality.

Literacy Rate, Adult • The percentage of the population age fifteen and over who can read and write.

mal-developed • A country's state of development is having a negative, even evil, effect on the abilities of other countries or of people within their own country to develop. The system of apartheid is an example of maldevelopment.

market economy • a society in which people specialize in productive activities and meet most of their material wants through exchanges voluntarily agreed upon.

market forces • the forces of supply and demand, which together determine the price at which a product is sold and the quantity which will be traded.

Marxism • the socialism of Marx and Engels, which makes the class struggle the fundamental force in history.

migrant workers • a term given to describe those people who have migrated across national frontiers seeking higher paying jobs and more attractive living conditions. Principal receiving areas are the United States, Western Europe, and more recently the Middle East oil exporting nations. Most migrant workers are recruited for jobs that local workers find distasteful or underpaid.

mixed economy • an economy which contains elements of both private and state enterprise. Virtually all economies are to some extent "mixed," in that no Socialist economy is without some degree of private enterprise, while Capitalist economies invariably have some state regulated industries.

modern • characteristic of the present or recent time.

moratorium • when a country suspends payments on a debt but declares itself willing to continue some time in the future.

multilateral negotiations • agreements between more than two parties; trade agreements and the exchange of goods and services among several countries.

multinational (or transnational) corporation • a company that operates its business in more than one nation.

national debt • the amount at any given time of outstanding government debt.

nationalization • the act of a national government in converting privately owned enterprises or industries—oil or railways, for example—into public or state-owned property.

New International Economic Order • the NIEO is a series of proposals adopted by the United Nations General Assembly in 1974 with the aim of achieving a fairer distribution of wealth among nations. The existing situation of world economics favors the industrialized countries at the expense of developing nations who supply raw materials. Thus, the most important measure in achieving a New International Economic Order is the control by countries of their own natural resources. Other measures include: diversified economies; curbs on the activities of multinationals; an increase in international social services; a revision of the foreign aid system (by which industrialized countries give aid to poorer countries); and an

increase in the processing of raw materials within the countries of their origin (i.e., the encouragement of secondary industry in developing countries.)

Newly Industrialized Countries (NICs) • countries that have built industrial economies since the late 1950s, notably Taiwan, Republic of Korea, Singapore, and some say Brazil. Most Newly Industrialized Countries have some characteristics of economically underdeveloped countries.

nonrenewable resources • natural resources that are finite in quantity (uranium) or are being produced at a rate that is very small compared to the rate at which they are being consumed (oil, coal, natural gas).

nontariff barriers • national legislation including import quotas, health, safety and packaging regulations and customs evaluation methods which restrict the volume of imports, intentionally or not.

Organization of Petroleum-Exporting Countries (OPEC) • an association of oil producing nations to set and maintain agreed prices for their product. OPEC, established in 1969, was little known until 1973-74 when they quadrupled the world price of oil. OPEC was compensating for the rising cost of their manufactured imports while oil prices had remained low. OPEC nations are Algeria, Ecuador, Gabon, Indonesia, the Islamic Republic of Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

overdeveloped • a comparative concept in which some countries are using more than their fair share of resources.

paradigm • a model or pattern.

per capita income • the average annual income per person of a group or country, calculated by dividing the total income by the number of people sharing that income (man, woman, child)

***Physical Quality of Life Index (PQLI)** • A composite measure of human wellbeing that combines the infant mortality rate, life expectancy at age one, and the literacy rate. Individual countries are ranked on a relative scale of 0 (low) to 100 (high). The measure was devised by the Overseas Development Council and provides a nonincome measure of well being as distinct from the Gross National Product Per Capita.

population explosion • a phenomenal increase in the rate of natural growth of the world populations. While the time required for the population to double was about 1500 years during the period 8000 B.C. to 1650 A.D., it now takes only about 35-37 years. This rapid increase of population is due to a combination of the application of modern drugs and large scale public health measures (control of specific diseases and improved sanitation) which have depressed death rates and extended the span of human life without any accompanying fall in birth rates. On the basis of present population trends, the United Nations Organization forecasts for the year 2000 a world population of between 5.5 and 7 billion people.

post-industrial age or post-industrial society • a new era characterized by computerized technology with information, rather than raw materials for industry, as the primary commodity.

power • the ability to act; the ability to influence and control individuals or groups.

power bloc • a group of nations bound together by common interests or goals; an alliance able to influence international affairs either by voting as a group (for example, in the UN General Assembly) or by exerting economic or military pressure.

price stability • the maintenance of prices at a certain level which encourages production, investment, and employment without inflationary or deflationary price movements. Price stability along with full employment and balanced international payments are considered major goals of any economy.

primary energy • the energy recovered from nature—water flowing over a dam, coal freshly mined, oil, natural gas, natural uranium. For the most part primary energy is converted into secondary energy.

primary industry • the production of raw materials such as minerals, agricultural products (crops), and other natural resources rather than manufactured goods. The exports of "developing nations" are mainly primary products.

private sector • that part of the economy not under direct government control. Beyond the productive activities of private enterprises, the private sector also includes the economic activities of nonprofit-making organizations and private individuals.

producers' associations • organizations and co-operative agreements among countries who produce the same commodity.

protectionism • a policy whereby tariffs, quotas, or other import restrictions are imposed on foreign commodities coming into the country in order to "protect" domestic producers of these commodities.

public sector • the combination of central government, local authorities, the nationalized industries and public corporations. The public sector of the economy is very important, and tending to increase in size in all western industrialized countries.

quality of life • in current usage, a phrase which appears to cover a miscellany of desirable things not recognized, or not adequately recognized, in the market place. Some qualities of the life of a community which cannot readily be valued or measured include such matters as civil liberties, compassion, justice, freedom, fair play. Secondly, there are such things as health and education, clean air and water, recreation, wild life, enjoyment of wilderness—desirable "goods" which are partly or wholly outside the market economy.

rain forest • a dense forest characterized by high rainfall and humidity, a relative absence of frost, a thin layer of topsoil and an abundance of life sustained by the forest canopy rather than the soil. Home to more animal and plant species than any other ecosystem, rainforests also help to regulate world climatic patterns. The world's rain forests currently cover an area the size of the United States, but are disappearing at the rate of 200,000 square kilometers a year (the area of Great Britain) due to population pressures and commercial exploitation.

refugees and displaced persons • generally defined as those people who seek asylum outside their country of origin due to a well-founded fear of persecution for reasons

of race, religion, nationality or political opinion. Also included are those who cross borders when fleeing from internal aggression or the serious breakdown of public order. It is persons in this latter group that have in recent years swelled refugee statistics so alarmingly. Today, there are about 15 million people who are "political or religious" refugees with a world average recently of 2,000-3,000 new ones a day.

***religion, belief systems, and values** • significant ideas and concepts that guide behavior.

renewable energy • energy from sources which are constantly being renewed or replaced, such as the sun, wind, tides, falling water and biomass.

rescheduling of debt • the stretching out of a debt repayments schedule; this process also includes agreement on the grace period, rescheduling fees charged by the banks and the lending margin (i.e., how high above the prime rate the interest rate on the debt is to be).

***research and development (R & D)** • the basic applied research directed to the discovery, invention, and design of new products and processes.

resistant crop variety • plant variety that is genetically bred to be resistant to certain insects, fungi, and diseases.

***resources** • any natural feature such as fish, forest, minerals, etc. which could be said to constitute actual or potential wealth.

rotation • a cropping system in which two or more crops are grown in a field in a fixed sequence. The benefits of rotation include reduced accumulation of disease and pests; weed control; and the maintenance and improvement of fertility, spreading the risk of specific crop failure.

Second World • the countries of eastern Europe, including the Soviet Union, which have had centrally planned economies.

secondary energy • an energy form that can be used for a variety of applications. Electricity and gasoline are the major examples of secondary energy. Others are charcoal, sorted and graded coal and cut and split firewood.

secondary industry • the production of manufactured goods.

***security** • the protection of the common concerns of society such as peace and care of the environment as well as the protection of individual liberties such as justice, freedom from hunger, and the freedom to pursue economic opportunities.

self-sufficiency • the goal of many countries to satisfy their own basic needs, with goods produced by their own people, rather than by relying on imports.

service industries • those industries not directly involved in the production of goods but which exist to satisfy other needs. For example, travel industries, medical care, etc.

socialism • a political and economic theory of social organization based on collective or governmental ownership and democratic management of the essential means for the production and distribution of goods; also, a policy or practice based on this theory.

socialist countries • usually refers to the Eastern European developed countries having centrally planned economies, but also includes India, Israel, Sweden, Norway and Finland.

soft currency • a currency whose exchange rate is tending to fall because of persistent balance of payments deficits or because of the building up of speculative selling of the currency in expectation of a change in its exchange rate. Governments are unwilling to hold a soft currency in their foreign exchange reserves.

soft energy and soft energy technologies • energy sources and technologies associated with the soft energy path; "soft" in terms of their impacts on the natural environment, health, and society. For example: small-scale hydro-power, biomass energy and photovoltaic cells.

sovereignty • claimed ownership; the right to exercise authority over the center of power and decision-making. Canada claims sovereignty over the Arctic.

Special Drawing Rights (SDRs) • or "paper gold," created by the International Monetary Fund as a new international reserve currency to supplement traditional reserve assets—gold and hard currencies. SDRs are allocated to individual countries on the basis of their economic strength. Like gold, they may be used for settlement of international accounts.

subsistence farming • farming which provides the necessities of life, but fails to produce surplus for sale or trade.

supply and demand • supply is the amount of a commodity which is produced, and demand is the amount of the commodity which the consumers want. According to the "law of supply and demand," if the demand for a product exceeds its supply, the price will rise. If the supply of a product exceeds the demand for it, there will be an overabundance of the product and the price will fall.

sustainable development • development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

***technology** • the sum of knowledge of the means and methods of producing goods and services. Technology is not merely applied science—things are often done without precise knowledge of how or why they are done except that they are effective. Early technology—craft skill—was almost entirely of this sort. Modern technology is increasingly science-based, however and, rather than relying on acquired skill, is easily communicable by demonstration and printed material to those qualified to receive it. It also includes methods of organization as well as physical techniques.

Third World • The term came into use in the Cold War Era when it was applied to those countries committed neither to Communism nor to a Western system of government and hence had a primarily political connotation. "Third World" was originally coined in the early 1960's by French demographer Alfred Sauvy in reference to the role of the "Third Estate" in the French Revolution. "Third World" has come to refer generally to the nations of Africa, Asia, Latin America, and Oceania and has taken on a primarily economic connotation

trade deficit • the excess of imports over exports.

trade liberalization policies • those policies or agreements among countries whereby trade barriers or import restrictions are removed. The EEC follows a trade liberalization policy in an effort to promote free trade among the member countries.

trade retaliation • economic measures taken by governments towards another in response to an unfavorable change in its trade agreements. It is often expressed by imposing duties on imports.

trade surplus • the excess of exports over imports.

traditional • pertaining to, or derived from the past.

transfer of technology • refers to the access to new technology as a key factor in the economic growth of "developing countries." Major obstacles have been the ownership of patents by private corporations beyond the scope of intergovernmental agreement, restrictive licensing arrangements and expensive royalties. A code of conduct for the transfer of technology to redress the balance between the "developing countries" and the transnational corporations is under preparation.

underdeveloped • a comparative concept expressing a relationship of exploitation, i.e., some countries are economically "developed" because others, the underdeveloped, are not.

underdeveloped countries • have some or all of the following characteristics: large proportions of the population in agriculture, low per capita GNP, economic and technological dependencies on other countries, and high population growth rates. Most are former colonies. The term implies that history can explain current inequalities between countries.

urbanization • a process leading to a profound societal change, characterized by the movement of people from rural to urban areas. Urban areas have become increasingly densely populated, as displaced farmers move in search of work.

wetlands • marshes, swamps, ponds and peat moss. Wetlands are home to a wide variety of wildlife. They are factories of biological production which purify water and regulate its flow—releasing it during droughts and containing it during floods. Millions of hectares of wetlands are being filled in across Canada and the United States, resulting in serious loss of wildlife habitat.

World Commission on Environment and Development (WCED) • also called the Brundtland Commission after its chair, Gro Harlem Brundtland, WCED was established by the United Nations in 1983 to re-examine the critical issues of environment and development; formulate innovative, concrete, and realistic action proposals to deal with them; assess and propose new forms of international cooperation on environment and development; and raise the level of understanding and commitment to action on the part of individuals, voluntary organizations, businesses, institutions, and governments. Our Common Future, the final report of the commission released in April, 1987, draws attention to energy and other policies and technologies which are threatening life on the planet through the greenhouse effect and other global, environmental problems, and recommends alternative strategies focused on the concept of sustainable development—agricultural and industrial practices which are sustainable over the long term.

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